



UniKix Mainframe Rehosting Software Platform Conversion Guide

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Chapter 1

Introduction

This document describes the tasks to perform when moving UniKix™ mainframe rehosting applications from one supported hardware platform or release to another.

The current UniKix software products are:

- UniKix™ Transaction Processing Environment (TPE) software, Release 11.0 (for HP-UX)
- UniKix™ Batch Processing Environment (BPE) software, Release 11.0 (for HP-UX)
- Clerity™ Mainframe Transaction Processing (MTP) software, Release 8.1 (for IBM® AIX® and Solaris)
- Clerity™ Mainframe Batch Manager software (MBM), Release 10.1 (for IBM AIX and Solaris)
- Clerity™ 3270 Pathway, Release 3.0

If you decide to migrate between product releases, please review the product documentation available with your specific target release for additional information to supplement the details in this whitepaper. You can also contact Customer Support by emailing info@clerity.com if you would like assistance moving between platforms.

Chapter 2

Pre-migration Tasks

Before starting your migration project:

1. Review the information in this section and on Clernity's Mainframe Rehosting Reference Architecture website to determine if you need to replace any third party software. If you do, procure the appropriate software.
2. Gather information about your existing regions and subsystems, such as copies of the setup files, so you can easily recreate them.
3. Set up your target platform system and install and configure all system software.
4. Install the third party software.
5. Download the proper UniKix TPE software (formerly Clernity MTP) or UniKix BPE software (formerly Clernity MBM), or both, from the support web site. Contact support at mfr-support@clerity.com for access to the web site if needed.
6. Transfer your existing license to your new system.
 - a. Click on the link to transfer your license found at <http://www.clerity.com/support/keyenable/keytransfer.html>
 - b. Fill out the form and submit it.
7. Ask your system administrator to review the operating system kernel parameters in the `/etc/system` file on your old system and compare them with the parameters on your new system. Depending on the size of your new machine, the administrator may need to change the parameters.

Third Party Products

If you are using third party products with your online or batch applications, you must determine if the products are supported or qualified on your target platform. Contact your Clernity representative to find out the latest supported versions of specific 3rd party software, in addition to the best way to migrate these products.

Chapter 3

Online Migration Tasks

There are three phases to migrating online applications:

- Installing the appropriate software (UniKix TPE or MTP depending on platform).
- Setting up the region or regions.
- Migrating application components.

When you have completed these tasks, you must thoroughly test your applications before putting them into production. Make sure to also test:

- All communications links
- Interfaces with third party products, such as RDBMS.

Installing the Online Software

When you install the software:

- Install UniKix TPE or MTP software on the hard drive.
- Create the new license file in the \$KIXLICDIR directory.
- If you customized any of the user exits, record processing routines or other components, review them and make any necessary changes. Then copy them to the appropriate directories on the target platform.
- Run the `kixinstall` utility to rebuild the online executables.
- Verify that the ownership and permissions on the executables are correct. These include the modules `kixclean`, `unikixstrt` and `unikixl`.

Refer to the *Installation Guide* for procedures to install UniKix TPE (or MTP) and verify your installation.

Setting up the Region

To set up a region:

- Create the directory structure for the region on the new target platform.
- Review the existing region setup file and change any environment variables that need to be changed.
- Copy the \$KIXSYS directory and its contents to the new \$KIXSYS directory. It contains the region's tables, VSAM Catalog files, `unikixrc.cfg` (or `.unikixrc`) file, and may contain other files needed for your application environment.

Note – If you are migrating from a UniKix/MTP release earlier than 7.1, refer to the

Installation Guide for information about converting tables and the VSAM Catalog.

- Copy the following files to the appropriate directories:
 - Data files
 - Programs
 - Maps
 - Copybooks
 - Include members
 - Database tables, if you are using an RDBMS

When copying your application components, you can use any of the standard methods:

- A UNIX copy, if the hard drives are cross-mounted
- FTP (in binary mode)
- A compatible tape
- A CD-ROM, if you have the software required to create CDs.

Migrating Application Components

When you move to a new platform, you must recompile your application programs and BMS maps. You do not have to do anything to VSAM data files.

To prepare your application:

- Reassemble BMS maps.
- Recompile application programs.
- Create the required shared objects, if you are using non-COBOL programming languages.
- If you are using ECI, EPI or C-ISAM programs on a UNIX[®] platform, you must recompile them.

Chapter 4

Batch Migration Tasks

There are three phases to migrating batch applications:

- Installing the Batch software
- Setting up the subsystem or subsystems
- Migrating application components

When you have completed these tasks, you must thoroughly test your batch job streams before putting them into production. Make sure to also test:

- All communications links
- Interfaces with third party products, such as RDBMS

Installing Batch Software

When you install the software:

- Unload the appropriate Batch software on the hard drive.
- Create the new license file in the \$KIXLICDIR directory.
- Verify that the ownership and permissions on the INSTEEM module are correct.
- Run INSTEEM to install the Batch node.

Refer to the *Installation Guide* for procedures to install the Batch software and verify your installation.

Setting up the Subsystem

After you install the Batch node:

- Create the directory structure for the subsystem on the target platform.
- If your subsystem has any custom components, review them and make any necessary changes. Then copy them to the appropriate directories on the target platform.
- Using the Batch Administration Manager (BAM), create the subsystem or subsystems.
- Review the old subsystem setup file and compare it to the one you just created. Change any environment variables that need to be changed.
- Copy the following files:
 - File_Map
 - JCL jobs from the `jmv`s or `jd`os directories
 - JCL procedures from the `mv`sp or `do`sp directories

- Source library include files from the `sli` directory (only if using IBM® z/VSE® operating environment JCL)
- Translated job macro scripts from the `ish` directory
- Translated procedure scripts from the `ishp` directory
- Data files
- Programs
- Copybooks
- Include members
- Parmlib members
- Database tables, if you are using an RDBMS
- Review the `File_Map` to verify that the directory structures are the same. Update it if the directory structures on the new system are different.

When copying your application components, you can use any of the standard methods:

- UNIX copy, if the hard drives are cross-mounted
- FTP (in binary mode)
- A compatible tape
- A CD-ROM, if you have the software required to create CDs.

Migrating Application Components

When you move to a new platform, you must recompile your application programs.

Chapter 5

Clerity 3270 Pathway Software Migration Tasks

Due to the API changes made in Clerity 3270 Pathway software release 3.0, any Java code that was written to use an earlier version of Clerity 3270 Pathway software will not work with the 3.0 or later releases. This affects both Java source code as well as compiled code. If you wish to migrate code that was developed using a prior release of Clerity 3270 Pathway software so that it works with the 3.0 release, read the information below and make the necessary changes to your Java source code.

Specific Clerity 3270 Pathway software release 3.0 details vary depending upon which release you are migrating from. These details are noted in the migration guide that is included with the Clerity 3270 Pathway software 3.0 release. Within the product documentation, this migration guide is located at `<wherever-you-installed-pathway>/doc/migration_guide.html`.

There are 3 general phases to migrating Clerity 3270 Pathway software releases:

- Installing the 3.0 release software
- Modifying application source code
- Rebuilding the application

Install Clerity 3270 Pathway software release 3.0

The Clerity 3270 Pathway software installation instructions contains details of the installation process. It should be noted that both Pathway 2.0 and Pathway 3.0 can exist on the same machine.

Modifying application source code

The source code for all Clerity 3270 Pathway software applications must be modified. All classes in release 2.0 had a package prefix of `com.sun.emp.pathway.bean`. In release 3.0, the same classes are in package `com.unikix.pathway.bean`. This API change means that all source files containing code that reference Clerity 3270 Pathway software APIs need to change.

Rebuilding the application

Building Clerity 3270 Pathway software release 3.0 applications is identical to building applications for release 2.0. However, it is essential that the release 3.0 of all Clerity 3270 Pathway software JAR files is used in the building and executing of the application. The names and relative locations of these JAR files are the same for both releases.