

## Clerity Mainframe Rehosting Reference Architecture



### Highlights:

- Delivers a robust, complete environment for deploying mainframe workloads on open systems
- Lowers annual IT operational costs by as much as 70%
- Supports a wide range of platforms including HP-UX, IBM® AIX®, Linux®, Oracle® Solaris™, Microsoft® Windows® and Linux on IBM® System z® servers
- Offers extensive compatibility with legacy environments – reducing migration risk, time, and complexity
- Preserves existing investments in personnel, code, data, and end user interfaces
- Provides a proven platform for future application evolution

### Simplify the journey and secure the destination with a proven roadmap for success

A growing number of organizations are realizing the operational and cost benefits of moving legacy mainframe environments to flexible and modern IT frameworks. However, the complex nature of the customized rules, procedures, and numerous third party products that often surround mainframe applications may have delayed such migrations in the past. By providing a framework that addresses not only specific application requirements, but also the related infrastructure products commonly found on mainframe systems, the Clerity™ Mainframe Rehosting Reference Architecture (MFRRRA) provides a proven, flexible roadmap for moving complete mainframe application environments to open, distributed platforms.

The Clerity MFRRRA is a tested, tuned, and fully documented implementation of a rehosted mainframe workload environment on a distributed operating system. Based on Clerity's proven UniKix™ mainframe rehosting software, migration and modernization technology, and key third-party infrastructure products, the Clerity MFRRRA reduces costs and deployment time and assists organizations in efficiently moving mainframe workloads to a robust, cost-effective platform that provides a safe path forward for future growth.

Clerity's mainframe migration and modernization solutions safely extend the benefits of open environments to legacy applications. Through Clerity's mainframe rehosting approach, online and batch applications are moved, or rehosted, onto affordable and efficient distributed platforms with little or no change. Rehosting is low risk by definition because business rules and procedures remain largely unchanged -- unlike a reengineering effort or custom off the shelf (COTS) implementation. By preserving existing investments and minimizing the impact to end users, Clerity helps organizations redefine total cost of ownership (TCO) and deliver substantial cost savings. More than 500 million lines of COBOL code at over 1300 installations have been migrated with Clerity's proven service methodologies.

### A complete, flexible IT framework for lowering costs up to 70 percent

The Clerity MFRRRA has been designed to reduce TCO by lowering risk and complexity, speeding time to deployment, and shortening payback periods. By providing a flexible framework that enables advanced functionality, high availability, scalable performance, and the ability to extend and enhance applications, the Clerity MFRRRA addresses criteria essential for designing, deploying, and maintaining successful IT implementations.

"By providing an implementation framework that captures these third-party product and sizing guidelines, Clerity's Reference Architecture reduces deployment time and risk for future implementations."

Naj Hirani, vice president and CIO, Transamerica Life Canada

Considerable emphasis is placed on the third-party infrastructure products that provide key functionality such as sorting, scheduling, output management, systems and performance management, database management and business intelligence. Unlike closed solutions that lock customers into one specific product suite, the Clerity MFRRRA provides a flexible and open framework for companies to make informed, flexible decisions tailored to their individual business needs.

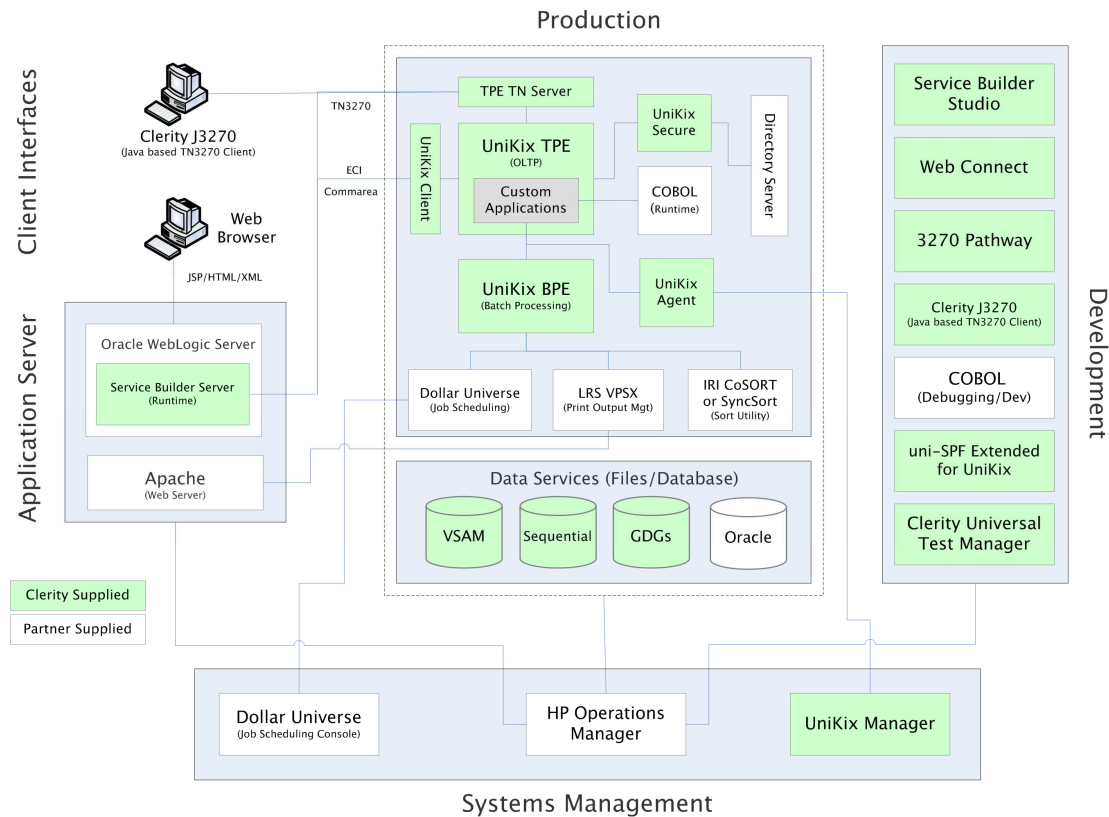
Once a business has moved to the Clerity MFRRRA, there may be interest in further modernizing the environment by enhancing functionality, interoperability, or end user interfaces. The Clerity MFRRRA also details how rehosted applications can be modernized using Clerity-based software such as Clerity™ Service Builder and Clerity™ Web Connect, products that provide the ability to generate Web Services against any 3270-based application, or to dynamically translate 3270 data streams into Web interfaces.

#### Fully-tested roadmap for success

The following table details the Clerity-based software products in the Clerity MFRRRA.

Product	Type	Description
UniKix™ Transaction Processing Environment (TPE) software	Transaction processing system	Transaction processing system on open platforms for rehosted IBM® CICS® transactions, IBM® IMS® applications, IDMS DC and other environments
UniKix™ Batch Processing Environment (BPE) software	Batch processing system	Batch Job Control Language (JCL) processing environment for open systems
UniKix™ Manager software	Performance monitor	Real time monitoring of UniKix TPE software
UniKix™ Secure software	External Security Manager	Role based access control (RBAC) software for UniKix TPE regions
UniKix™ J3270	TN3270 terminal	Java based TN3270 client used to connect to UniKix TPE systems
Clerity™ Service Builder	SOA enablement	Software which exposes 3270 based transactions as Web Services
Clerity™ Web Connect	Web enablement	Software to Web enable 3270 transactions
Clerity™ Universal Test Manager	Testing	Technology to automate the creating, managing, and validating of test cases for any 3270-based application

Additional third-party and platform vendor specific solutions were also selected for the Clerity MFRRRA. A complete list of supported solutions can be found at <http://www.clerity.com/products/mfrra>.



**Figure 1.** Sample Clerty MFRR Infrastructure

### Proven, flexible infrastructure solutions

Each time a customer utilizes the Clerty MFRR they can rest assured that Clerty has already completed the due diligence required to architect a complete implementation that is proven to work and deliver results.

As seen in Figure 1, *Sample Clerty MFRR Infrastructure*, the Clerty MFRR application architecture is built upon distinct layers; client interfaces, application server, production, development, and systems management.

- The client interfaces layer consists of a combination of Web browser and TN3270 based clients which access the production layer indirectly via both HTTP/HTTPS (SOAP and/or HTML/JSP) running on an optional application server, or directly via TN3270 over TCP/IP.
- The production layer provides the platform for running the bulk of the Clerty MFRR application functionality, including Clerty mainframe rehosting software, database, and related third party products.
- The systems management layer provides a dedicated platform for monitoring the application and systems environment.
- The development layer consists of application development, debugging, and test solutions.

The Clerty MFRR can be implemented to meet elevated availability requirements. A systematic approach is taken to illustrate redundancy, fault isolation, and rapid recovery options. The reference architecture scales from small single or dual processor servers up to massive symmetrical multi-processing systems, all using the same binary code. As resource demands grow with increased numbers of users, data sets or other elements, the architecture scales seamlessly to meet future needs.

### Services for lifecycle management

Clerty service professionals offer a complete range of solutions that address the entire project lifecycle from Reference Architecture proof-of-concept, to integration, implementation, and ongoing support. Combined with the ease of integration with distributed hardware and software products, the Clerty MFRR incorporates all the necessary elements for long-term customer success.

Through a continuum of migration expertise, technology, and global coverage, Clerty service experts support the Clerty MFRR, thus helping improve service levels, reduce infrastructure complexity, and lower the cost of network computing environments.

## About Clerity

Clerity is a leading full-service provider of legacy migration, modernization, and optimization solutions. Drawing from over 16 years of experience, Clerity recognizes that companies have significant investments in core applications and procedures and provides a wealth of low risk, high value tools, technology, and services to reduce IT costs without sacrificing current functionality and service level agreements. Headquartered in Chicago, Illinois with offices worldwide, Clerity has customers in all in major countries, including some of the largest financial services ISVs and Fortune-class end users.

Learn how Clerity can provide an evolutionary path forward for your application and data environments at [www.clerity.com](http://www.clerity.com).



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