UniKix Mainframe Rehosting Software

UniKix 11.0 Release Overview

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Introduction

Clerity Solutions, Inc. (Clerity) is pleased to announce the latest release of its UniKix™ mainframe rehosting software suite, UniKix 11.0. UniKix technology provides a proven, mission critical environment for running legacy online and batch workloads on cost-effective open systems platforms including IBM® AIX®, HP-UX, Sun Solaris™, Linux®, and Linux on IBM® System z®. The primary components of Clerity's UniKix mainframe rehosting suite include:

- UniKix™ Transaction Processing Environment (TPE) software – a native, high-performance transaction processing environment for open systems platforms that manages application-based resources such as programs, files, queues, transactions, screens, and terminals.
- UniKix™ Batch Processing Environment (BPE) software – a robust, native middleware framework for administering, executing, and managing IBM® z/OS® environment and IBM® z/VSE® environment batch workloads, as well as third-party system management software components on open environments.
- UniKix™ Manager software – a graphical visualization and monitoring tool that allows users to view and monitor UniKix TPE system events from any system on the network; providing centralized, real-time information for determining system status, processing rates, potential bottlenecks, and configuration enhancements.
- UniKix™ Secure software – a comprehensive Role Based Access Control (RBAC) solution that meets the needs of businesses reliant upon high volume and secure operations.

In the 11.0 release, Clerity has enhanced the functionality and capabilities of its UniKix software offerings in the following areas:

- Greater deployment platform choice
- Advanced security features
- Batch processing improvements
- Enhanced IBM® CICS® transaction compatibility
- Performance and resource management

The remainder of this document describes these enhancements in more detail.

Greater Platform Deployment Choice

For nearly 20 years UniKix mainframe rehosting software has provided a complete, native environment for running legacy workloads on open systems. With UniKix 11.0, a wider range of platforms on which to deploy is now available, making UniKix a better fit for organizations with specific consolidation and target deployment platform requirements.

Supported platforms now include:

- HP Itanium® IA64 systems running HPUX 11i versions 2 and 3
- IBM® System p® servers running the IBM® AIX® 5.3 operating environment and greater
- Sun SPARC® systems running Solaris 10 and greater
- x86 or x64 systems running SuSE® Linux Enterprise 10
- IBM System z servers running SuSE® Linux Enterprise 9

Additional certifications complete with UniKix 11.0 include:

- IBM® DB2® software and Oracle® 10g database for all platforms
- IBM® WebSphere® MQ for all platforms
- IBM Communications Server to deliver ISC over SAN on AIX, SuSE Linux and Solaris

When Clerity implements a mainframe rehosting project, we are equipped to address not only the application at hand, but also the complete infrastructure and solution if desired.

To this end, platforms such as IBM AIX and HP-UX are now supported in Clerity's Mainframe Rehosting Reference Architecture (MFRRA) as well. Additions to Clerity's MFRRA can be found online at http://www.clerity.com/products/mfrra/.

Advanced Security Features

Implementing effective security measures continues to be paramount across all levels of business. Several security enhancements have been added in UniKix 11.0 which brings Clerity's open systems implementation even closer to mainframe security levels.

- Support for "CICS user attributes" (the "CICS segment" as known to IBM® RACF® security software) has been added to UniKix Secure. Specifically, IBM RACF software user attributes such as operator name, operator id, and operator class are now available in the UniKix Secure repository.

- Support for IBM RACF Groups has been added to UniKix Secure in the 11.0 release. Now administrators can cluster a group of users into a membership with certain privileges. IBM RACF software administrators who are used to grouping individuals and creating hierarchical permissions can extend that functionality on open systems.

- Extensions have been added to UniKix Secure so that users can start a transaction under a different user id.

- Additional parameters in `Verify Password` are now supported to allow an external security manager (ESM) such as UniKix Secure to monitor activity such as expiration date and time for a password, last login, etc.

Batch Processing Improvements

In UniKix 11.0, several enhancements were made to the native batch processing capabilities delivered with UniKix BPE software. These improvements further simplify the process of rehosting and administering batch workloads on open systems.

- Batch reporting functionality and throughput capabilities have been enhanced by improving read access and parallelism of batch access to VSAM files.
- Copybook support has been added for a common BMS Macro feature know as the LANG=COBOL2 option in DFHMSD. With this support, the UniKix BPE translator now generates copybooks that support the native COBOL language Double-Byte Character Set (DBCS) characters that appear in BMS Maps. Specifically, the translator now generates PIC G which is a double-byte character type in COBOL.
- Several improvements were made in the area IDCAMS utilities, commonly used to create and manipulate VSAM data sets.
    - Support has been added for the REPRO command. Organizations reliant on REPRO code to save processing time and maintain critical batch windows can now deploy that same functionality in UniKix BPE software. REPRO command options such as FROMKEY, SKIP, TOKEY, COUNT, and VSAM-to-VSAM copy are supported.
    - Additional IDCAMS utility improvements such as DELETE, DEFINE, ALTER, NEWNAME commands are also supported in UniKix 11.0.
- Disk locking support and enhancements to intra-job file sharing have been added in UniKix 11.0 for customers who depend on such functionality to maintain application and data integrity.

CICS Processing Improvements

UniKix TPE software allows organizations to preserve existing investments in IBM CICS workloads, while enabling an affordable deployment platform for future growth and development. UniKix 11.0 adds support for the following online processing features:

- IBM CICS Web API and Document API support have been added in UniKix 11.0. Organizations that have deployed IBM CICS Web Services on the mainframe can now have HTTP requests handled directly in a UniKix environment by EXEC commands. UniKix TPE can also deliver documents in an HTTP response. Specific supported IBM CICS API and Document commands can be found in the UniKix 11.0 documentation release notes.
- With UniKix 11.0, additional Inquire options are now supported. Administrators can inquire on the status of terminal connections and report on the status of a specific component, enabling more detailed reporting. Information can now be more easily gathered on host names, connect status, terminal type, etc.
- In the 11.0 release, UniKix TPE has increased support for Temporary Storage (TS) Queue names, from 8 character to 16 character names. This extends another feature that customers are used to with IBM CICS software on the mainframe.

Performance and Resource Management

The UniKix 11.0 release includes the following performance and resource management advances:

- By improving support for the IBM CICS translator in UniKix 11.0, deployment and maintenance is now further simplified for customers with common sub programs and applications that need to be shared between online and batch environments.
- For organizations with consolidated deployments running multiple workloads in the same environment, shared memory management capabilities have been enhanced. In UniKix 11.0, administrators can configure the maximum amount of share memory they require for a specific system instead of allowing shared memory segments to be dynamically assigned.
- Support for pThreads has been implemented in UniKix 11.0. This addition improves performance and normalizes future cross-platform improvements. pThread support also substantially reduces waits behind gated structures such as buffers, tables, and queues.