

mvEnterprise Database Management System

Enterprise Solution for UNIX Systems

Performance and Flexibility

mvEnterprise offers the ease of use and hierarchical power of the multivalued database model with the performance and flexibility of UNIX. The Open Data Architecture (ODA) and UNIX interoperability tools provide a seamless interface between mvEnterprise and UNIX.

mvEnterprise features many enhancements for high performance, effective administration and compatibility with other multivalued environments, providing a near-seamless migration from R83, OA, Ultimate, Prime INFORMATION, Reality and others. The data interchange extensions in mvEnterprise are the most robust in the industry.

- Improve performance with this efficient, high-performance and scalable multivalued database
- Quickly and easily port applications from other multivalued systems
- Leverage the full capabilities of UNIX with support for a wide variety of hardware peripherals and communication tools

mvEnterprise and UNIX

mvEnterprise users do not need to be UNIX experts because they are shielded from the UNIX environment. At the same time, they benefit from the advanced communication features of UNIX as well as the wide variety of hardware peripherals supported.

mvEnterprise is designed to fully leverage the capabilities of the UNIX operating system while maintaining compatibility with the easy-to-use multivalued environment. Each individual mvEnterprise user is an independent UNIX process, scheduled and controlled by UNIX. In addition to providing complete symmetric multiprocessor (SMP) support, this technique ensures proper load balancing of memory, CPU and other resources between UNIX and mvEnterprise processes.

UNIX interoperability tools allow mvEnterprise plus other multivalued databases and UNIX to cooperatively co-exist and share data. Extensions to BASIC allow UNIX files to be accessed from within the mvEnterprise environment. UNIX commands may be executed from TCL or BASIC programs and mvEnterprise commands may be executed from UNIX. The ability to redirect or pipe process output between mvEnterprise and UNIX allows mvEnterprise processes to utilize UNIX communication facilities. The two environments may share printers.

Reliability and High Availability

mvEnterprise was designed to maximize system up time. File resizing can be done without a file save/restore. Multithreaded and/or incremental save and restore functions reduce the time required to save/restore the

system.

mvEnterprise includes a set of support utilities that track aborts and other system events. The data gathered by these tools allow field problems to be resolved quickly and reliably. This information has been used to gain insight into how applications use the system and applied to the mvEnterprise design to achieve outstanding reliability and performance in real world applications. Update Logging provides a direct means to resolve event failure in case of system outage. Updates may be written to tape and/or to a hot backup machine via an Ethernet connection. mvEnterprise transaction logging is optimized for high volume systems and can handle instantaneous data influx rates in the 2 GB/hour range.

Optimized Performance

mvEnterprise BASIC and ACCESS include many design enhancements to optimize performance.

B-tree indexing provides improved data access performance. Spooler functions have also been optimized for enhanced throughput. Features such as multithreaded tape operation, reduced lock contention and improved group/record lock algorithms maximize the benefits of the SMP architecture.

Uncomplicated, Effective Administration

mvEnterprise administration tools not only provide standard system administration, but also allow for analyzing system performance and problems. Additional tools allow keyboard and screen capture and playback to analyze a user problem. The Tandem command may be used to view and modify another user's process. The ability to have multiple mvEnterprise databases on the same hardware simplifies testing, training and system upgrades.

Time saving features such as incremental save and restore, multithreaded tape operations and enhanced POVF overflow handling reduces the time and effort involved in standard administration tasks. The background process scheduler allows system administration tasks to be initiated automatically at a pre-specified day and time.

Scalable for High-End Solutions

mvEnterprise is nearly limitless in its ability to support high-end business solutions. Up to 4,000 users may access a single database. Disk space can be added to the database without a save/restore cycle. Only an mvEnterprise shutdown and coldstart is necessary to add the additional disk. Support for multiple CPU and RAM allocation is managed by UNIX and limited only by UNIX's capabilities. The spooler supports 32,676 entries, form

Open Data Architecture

Open Data Architecture (ODA) is an optional feature that provides a standard mechanism for handling non-file entities as if they were standard mvEnterprise files. Q-pointers allow access to multivalued data on a remote system, local UNIX data, CD-ROM data, remote UNIX data or remote DOS data. ODA allows enterprise-wide data to be transparently distributed across multiple systems without making application changes.

mvEnterprise Features

UNIX PLATFORMS SUPPORTED:

mvEnterprise 4.2

- AIX (4.3.2 and higher)

mvEnterprise 4.1

- AIX (4.3 and higher)

ADVANCED DATABASE FEATURES:

- Multivalued database
- R83, OA compatible with extensions for Ultimate, Reality and Prime INFORMATION
- High-performance BASIC compiler and run-time with the compiler having saved object capability
- Extended BASIC debugger tool
- Powerful BASIC development language that includes many features such as system variables (@DATE, @TIME, etc.) and RECORDLOCKED command
- Enhanced English-like access query language, ACCESS, with a multitude of modifiers and options such as SAMPLE, MIN, MAX, etc.
- Unlimited item size, file size and multivalued file opens
- B-tree indexing
- TCL Stacker
- Optimized overflow management
- NEWPROC (PQN) support
- File Item Editor (ED)

UNIX INTEROPERABILITY FEATURES:

- Read/write UNIX files
- Execute UNIX commands from TCL or BASIC programs
- Execute mvEnterprise commands from UNIX
- Ability to pipe between mvEnterprise and UNIX
- Shared printers
- Open Data Architecture (ODA) for access to files

outside of current mvEnterprise database

SCALABILITY FEATURES:

- Supports up to 4,000 users
- SMP support provided by UNIX
- Supports up to 8 terabytes of disk in a single database
- Memory managed by UNIX
- Spooler supports up to 32,767 entries, form queues and printers
- Up to 32 tape devices supported
- Pseudo tape

ADMINISTRATION FEATURES:

- Transaction logging (tape and hot stand-by mvEnterprise system)
- Robust file resizing utilities
- Multithreaded save/restore
- Tandem, Break
- Warmstop/Warmstart
- Performance monitoring utilities
- Background process scheduling
- Phantom processes
- Password aging and global logon
- Multiple mvEnterprise virtual machines possible on one physical system for testing and security reasons
- Save/restore monitoring and VERIFY-SAVE utility
- Add disk without need for file save/restore
- Tape-to-tape copy and multiple tape attachments
- Level pushing
- Enhanced spooler with support for Reality spooler menu and named form queues
- Reallocation and resize utilities
- Terminal input/output capturing (COMO files)
- NICE command for changing process priority
- VERIFY-DATABASE, line ANALYZE, COMATIZE, GROUP-ANALYZE utilities

Contact Information

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