Re-host mainframe applications and dramatically lower your costs

Dell Transaction Processing Environment software

Comprehensive mainframe transaction processing on distributed systems
With Dell™ Transaction Processing Environment (TPE) software, you can run and update mainframe applications and data on cost-effective industry-standard systems. The software protects proven application investments, as well as related source code, data files and screen definitions, providing a scalable platform for integrating those IT assets with new Java Enterprise Edition (JEE), service-oriented architecture and web services. As a fundamental part of Dell’s mainframe re-hosting solution, Dell TPE provides a solid foundation to extending the life of business-critical legacy workloads.

Cut costs without impacting ongoing operations
Dell TPE software has enabled many organizations to cut annual operating costs by 30 to 70 percent without impacting ongoing operations. The software provides a safe alternative for custom IBM® CICS® transactions, IBM IMS™ TM applications, IDMS DC and related legacy systems. Unlike reengineering or commercial-off-the-shelf (COTS) alternatives, applications remain intact with the Dell re-hosting approach. Development resources easily adapt to the new environment and application end-users may not even require retraining.

Preserve and extend valuable business logic, data and end-user interfaces by re-hosting mainframe applications to industry-standard systems

Key Benefits
- Runs re-hosted IBM CICS transactions, IBM IMS™ TM applications, IDMS DC programs and related resources on industry-standard systems
- Offers native support for VSAM files in addition to leading relational databases
- Includes GUI-based administration and monitoring, as well as built-in diagnostic utilities
- Utilizes authentication and resource-level security similar to IBM RACF® technology
- Maintains transactional integrity and consistency
Scalable and robust transaction management
Central to Dell TPE software is a powerful, logically-threaded engine that provides a rich transaction processing environment. Built on a highly scalable architecture designed to take full advantage of a shared pool of server processes, the software’s performance improves linearly as additional CPUs are added to a deployment platform. Because Dell TPE uses multiple threads, there is no need for administrators to run numerous regions or replicate environments to support high volume workloads. This means applications that were previously mainframe-based continue to enjoy a high-throughput transaction processing system — one that supports a network of thousands of concurrent users accessing large, heterogeneous databases without complex configuration requirements.

To maintain robust transactional integrity and consistency after migration, Dell TPE software supports parameters such as commitment and recovery, as well as user-level file locking, lock contention and resolution.

Connectivity and interoperability
Supporting a high degree of compatibility with mainframe systems, Dell TPE software provides a flexible alternative for complex legacy environments.

The connectivity extensions in Dell TPE handle a large set of distribution and intercommunication services between Dell TPE and IBM CICS systems. To another mainframe, Dell TPE software can appear as a “remote region.” Interoperability between regions can be addressed by Intersystem Communication (ISC), IBM MQSeries® technology and SNA networking.

Dell TPE software supports transaction routing, enabling it to act as a terminal-owning region (TOR), application-owning region (AOR), or data-owning region (DOR). It also supports resource definition online (RDO), which allows attributes of resources associated with a Dell TPE software region (maps, programs, etc.) to be added, removed or modified dynamically.

Data access and integrity
Dell TPE software supports all three major mainframe VSAM file types — KSDS, RRDS and ESDS — as well as popular relational databases like IBM DB2®, LUW, Microsoft SQL Server, Oracle® database and Sybase. The technology allows for recovery of VSAM files, temporary storage queues, transient data queues and asynchronous transaction starts. All interactions with relational databases and VSAM files are controlled and synchronized usingXA-compliant architecture. To ensure data integrity, full two-phase commit and rollback commands are supported, and database recovery facilities are provided.

Application types
Dell TPE software can move a large number of application languages and utilities to industry-standard systems, while keeping valuable business logic intact. This allows your organization to gain immediate reuse advantages.

Our re-hosting software supports distributed COBOL platforms such as Dell™ Enterprise COBOL and Micro Focus COBOL, and uses Open PL/I to support PL/I programs. It can also execute applications written in the C language, C#, Natural, as well as Java.

End-user interface options
Dell TPE software supports multiple client and presentation options including desktop workstations, web browsers, telephones, ATMs, voice recognition units, kiosks, smartcards or other internet-enabled appliances.

System administration and monitoring
Dell TPE software eases the tasks required for enterprise application management by supplying and supporting a variety of administration tools. Facilities are provided for table management, file management (which includes VSAM catalogs and files), record editing, resource and access management and problem determination, such as database recovery and problem trace facilities.

Dell™ TPE Manager is included with Dell TPE to enable remote management and monitoring of Dell TPE regions. By displaying real-time system status and processing rates, Dell TPE Manager’s Java-based GUI provides a flexible and comprehensive interface for enhancing the efficiency and performance. It also features an alerting capability which allows administrators to be automatically notified of potential application bottlenecks or issues.

Dell TPE software accounting resources collect information on system usage that can help administrators gather resource utilization information, including transaction execution, program execution, CPU utilization,
Re-host mainframe applications and dramatically lower your costs

file access, elapsed time and numerous other criteria. This information can be used for leading third-party accounting packages, as well as capacity planning for one or more systems.

Flexible and secure environments
The Dell TPE software allows a wide range of security options. Basic user sign-on validation is provided though the administration of sign-on table entries, as well as through External Security Management (ESM) systems. Customizable user exits can also be used for individual resource-level access control and audit requirements.

Leveraging Dell TPE software with Dell Transaction Security Facility (TSF) provides a flexible and secure environment for application resource control. Dell TSF is an extensible ESM available for Dell TPE software environments. It uses a role-based access control (RBAC) security model to handle regions and associated resources that includes support for LDAP.

Software development
Developers can maintain current productivity levels and broaden their skill sets through the use of leading, open systems solutions, made possible by a comprehensive development environment available for Dell TPE software.

Developers continue to write, maintain, support and extend Dell TPE software application programs in much the same way they did on the mainframe for Java, COBOL, C or PL/I programs. The Workstation Group’s uni-SPF offering has been extended to facilitate a customized development platform similar to the familiar mainframe ISPF environment for Dell TPE software.

A complete lifecycle approach to services and support
To ensure that your team can actively develop, manage and evolve application environments following any implementation, Dell offers a range of post-migration lifecycle services.

With just one phone number, you can take advantage of our comprehensive product support and access a wide range of expertise on many third-party products typically implemented with a Dell TPE system. Let Dell’s world-class technical support team help you successfully manage issues from root cause analysis to final resolution.

Evolutionary path forward
After moving a mainframe system to a re-hosted environment, your team will be able to develop new processes, architectures and end-user interfaces.

You’ll also be able to implement initiatives such as web services and SOA in a cost-effective, scalable platform. Dell TPE technology supports the Web and Document CICS APIs and allows JEE applications to access transactions as defined in Dell TPE software.

Start developing future business initiatives today. With Dell TPE technology, you can build on existing application investments and bridge legacy applications with solutions that minimize risk and maximize results for many years to come.

For more information about any of our service offerings, please contact your Dell representative or visit dell.com/services.