IBM z/TPF
To support your business objectives

Optimize high-volume transaction processing on the mainframe.

The cornerstone of today's global economy

Today's global business is demanding and complex. It requires vital, mission-critical data to move at split-second speeds—regardless of whether that data is moving down the street to a supply-chain partner or around the world among international corporations. And extraordinary demands for around-the-clock operations require rock-solid speed, availability, reliability, resiliency, scalability and performance.

The modern mainframe, rich with applications and functions developed over decades, continues to grow in importance. In fact, many of the applications and systems installed years ago are not only in use today but can also provide exciting new opportunities to extract financial and operational value when they are enabled for Web services.

Though it is often a largely invisible back-end function, transaction processing is one of the core capabilities of the modern mainframe. Entire industries, such as financial services and travel and transportation, literally owe their current place in the global economy to their leadership in transaction-processing systems, and could not exist in their present form without them. And it is clear that other industry segments including telecommunications, healthcare, distribution, government and media, among others, are poised to take advantage of the explosive growth in transaction processing.

Telecommunications firms want to provide composite and consolidated content to their customers' mobile devices. Electronic medical records for healthcare require entirely new levels of transaction processing, with federal laws specifying ever-more-stringent security as well. Likewise, the distribution industry is rapidly moving toward the real-time exchange of point-of-sale (POS) information combined with supply-chain management using radio frequency identification (RFID) tags.

Transaction processing can only continue to grow in importance as a critical component of the world's economic engine—responsible for handling trillions of transactions every year. The workload volume managed by industry leaders in transaction-processing systems is enormous. Clients interviewed for a report by the International Technology Group (ITG) reported peak loading of more than 25,000 transactions per second.[1]

Real-time transaction processing —the heart of commerce

The explosion of Web-based business is fueling the continuing growth of the global economy and placing ever-greater demands on transaction-processing systems. Travel-reservation systems that once supported only travel professionals are now directly accessible by anyone with an Internet connection and a Web browser. The number of potential users has gone from tens of thousands to hundreds of millions in only a few years. Similarly, credit card companies that once relied on paper receipts, manual data entry and batch processing are now called upon to authorize billions of dollars in purchases almost instantly by millions of merchants around the world who are directly connected to secure authorization and validation systems.

Taking transaction processing to the next level

Clearly, there is measurable financial and operational value to be extracted from existing applications and IT assets, often in combination with new applications, and all enabled for Web services. Monolithic applications in rigid, strictly defined business models do not provide the agility businesses need to remain competitive in a complex and dynamic environment. Businesses require loosely coupled, Web-enabled capabilities that are adaptable, and able to meet immediate and evolving market needs.

How do you achieve this agility? Businesses in this situation can be pulled in two directions at once. They are torn between the requirement for flexible, open IT solutions that can be integrated and extended throughout the enterprise—and the need to make the most of existing critical systems that must be protected not only for obvious economic reasons, but also for the business intelligence that is embedded within them.

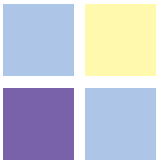
You can make huge strides toward achieving measurable agility for your business by integrating transaction-processing systems on mainframes into a service-oriented environment that enables you to transform valuable assets into more-accessible Web services, helping you to create a highly responsive and flexible business. Not only do you retain the reliability, availability and serviceability of your critical existing assets, but you are able to extract new value from them and gain the adaptability necessary to stay ahead of your competition.

Make it quick—and nimble

Service oriented architecture (SOA) is quickly becoming the *de facto* industry standard for building robust, flexible IT infrastructure, because developers can use this model to create applications in a way that is independent of a particular network protocol or operating system. Breaking a complex business function into smaller, individual services creates a more-flexible application which can react more quickly to changing market conditions. The idea is to create individual services that provide a well-defined function and are designed with reusability and ease of use in mind.

Instead of creating monster services that run complex business functions, you can design more-modular services that implement parts of the overall business function and are more likely to be reused elsewhere. The overall business function can then be assembled on often loosely coupled systems by combining multiple, smaller services into a more-complex compound service.

The IBM System z™ Transaction Processing Facility (z/TPF) system is an operating system and transaction processor that works with application programs to process transactions for customers in a mainframe, real-time environment. The z/TPF system is designed for businesses and organizations that have high online-transaction volumes and large networks. Because of its high capacity and high-availability characteristics, the z/TPF system is well suited for environments where growth is expected to be very fast or unpredictable, or where there are high peak periods of transaction activity. It is especially useful for applications that need high capacity and business models which invest in the capability to operate profitably at the lowest-possible cost per transaction.



IBM z/TPF is an efficient and reliable processor of transactions. This function, however, is only one part of a solution required in any industry. The modern IT solution has to incorporate and integrate many functions, and therefore multiple products, to address the requirements of the business process. It is often appropriate to have business logic and applications on different systems and different platforms. Ideally, these systems are integrated seamlessly, to improve the customer experience while maintaining a reasonable level of cost. That's why z/TPF is designed to work in a loosely coupled and service-oriented environment—so that it can allow seamless connectivity across heterogeneous systems.

Open for business

For most companies, z/TPF systems become their mainline, critical-path business systems. The functions provided by these systems and the applications that implement those functions are key business assets. Significant new value can be extracted from these systems in an SOA framework. z/TPF facilitates an SOA implementation by providing standards-based access to existing applications and data and by enabling your SOA to scale larger than it otherwise could.

z/TPF uses an open-standards-based Linux® development environment, helping to minimize the need for multiple tools and make the most of common skill sets. And the reuse inherent to a service-oriented environment helps increase the productivity of developers, enabling them to develop solutions faster and more cost-effectively—and get your products and services to market ahead of your competition.

With z/TPF running as your high-value transaction-processing system, you can increase revenue by creating new routes to market—and new value from existing systems. And you can offer new services to customers without having to worry about whether your underlying systems are up to the task. You can also drive down costs by eliminating duplicate systems, and combining and reusing components to get new function up and running quickly.

z/TPF also enables you to develop plug-and-play business models that allow you to react to market changes more quickly for immediate business flexibility. The increased efficiencies that come with this adaptability help reduce cycle times, and the improved visibility into business operations helps you minimize risk and continually make adjustments to keep operations running optimally.

z/TPF is designed to fully protect your investment in existing systems while embracing open standards to support current and future developments. As a result, you can seamlessly integrate robust transaction-processing systems into service-oriented IT environments.

But the benefits of z/TPF are not limited to companies with existing transaction-processing systems. By basing your transaction-processing solution on z/TPF (rather than a distributed computing model), you can gain the mainframe advantages of reduced total cost of ownership (TCO), extremely high performance and centralized maintenance, as well as the business resiliency that comes with high availability, security and reliability. You can also benefit from the economies of readily available UNIX® and Linux development skills, and the ease of integration afforded by open environments.

It's your move

It's routine and it happens millions of times a day around the globe—tickets are bought, reservations are made, hotels are booked, flights depart and arrive, credit card purchases are authorized, money is dispatched. And, for the most part, it happens without a flaw. But it doesn't happen by chance.

In most cases, behind the airlines, railroads, hotels, banks and credit card companies is a z/TPF system at the heart of operations. The workload capacity and dependability of z/TPF systems are remarkable—trillions of transactions per year. Currently installed in major data centers, z/TPF offers performance today that is is founded on many years of development focus by IBM.

Take advantage of the opportunity today. Choose a high-volume transaction-processing solution that is designed to excel in even the most-demanding operational environments. Raw power. Huge networks. High availability. Speed. z/TPF offers all these benefits with the outstanding flexibility, reliability and availability you need to succeed in today's marketplace.

For more information

To learn more about the IBM z/TPF system, contact your IBM representative, or visit:

ibm.com/tpf

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[1] "Value Proposition for TPF Mail and Web Serving." International Technology Group. 2001.

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