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IBM Extend zSeries Security Fabric across the Enterprise IT Infrastructure

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Long considered the epitome of reliability, manageability, and availability for IT data centres, the mainframe has provided a secure environment for countless mission-critical systems. As the head of the eServer family, the eServer zSeries has led the way in high-end innovation for IBM. IBM are now extending these capabilities beyond the mainframe to other parts of the IT infrastructure, allowing IT managers to construct "secure vaults" for enterprise data.

Don't Worry, It's on the Mainframe.

IT managers trust mainframes. IBM estimate that 80% of corporate data resides on or originates from mainframe environments. While the mainframe hasn't always been the sexiest system on the block, it has been the big, strong, hero that could be relied upon. Conventional wisdom said that managers could sleep better at night if they had a mainframe in the house. It was reliable in ways that other systems only dreamed of being. What is less appreciated about the mainframe is that it is also one of the most secure systems available. Most organisations have complex architectures with various systems for diverse applications. Although it may not be appropriate to put all these applications onto the mainframe, extending mainframe protection and reliability to those systems could be an effective way to provide more security and resiliency to the organisation and in essence create a "secure vault" for enterprise data.

Over the last few years, several standards have emerged in corporate computing that play a role in IBM's approach to the data centre. The ongoing development of open standards, increased integration between technologies and architectures, the emergence of virtualisation capabilities, the advancement of autonomic or self-healing technologies, and the development of grid capabilities have led the movement away from data centres as a group of semi-isolated systems, and toward the data centre as a network of resources that interact with and affect each other. IBM seek to reinforce and strengthen this grid, evolving it from a fine wire framework to something akin to a Kevlar mesh: strong yet highly flexible. This paper looks at some of the ways a mainframe can be used to extend security and resiliency to other parts of the IT infrastructure.

Creating the IT Expressway System

Most large cities have a variety of roads, from smaller local roads to broad boulevards and high-speed tollways and expressways. IBM's mainframe protection can be likened to an expressway or toll system that regulates access to various locations within the city that might not otherwise have access to city services. The mainframe services accessed include some for increased resiliency and some for security.

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To improve resiliency, data can be secured by storing it on the mainframe itself. By means of parallel sysplex technology, IBM can guarantee 99.999% availability across zSeries resources. However, basic availability is not enough; data needs to get to the right location quickly. The zSeries' intelligent management of system resources ensures that once business priorities are entered, users get access to data with minimal interruption. IBM also have a zSeries product called geographically dispersed parallel sysplex (GDPS) that allows for remote backup and system recovery as well as remote mirroring of integrated data for additional protection. Information gathered by the system provides an availability impact analysis of resources and their associated business processes to managers. In the end, integrated data can be managed more efficiently. This means that businesses can dedicate their IT resources to innovation and business priorities rather than on managing individual islands of IT resources.

The zSeries can also be used to improve corporate security. The mainframe can provide superior authentication, authorisation, auditing, and administration of security for the data centre. The zSeries has state-of-the-art data encryption and decryption capabilities with dedicated cryptographic processors. It comes with PKI for creation and management of digital signatures, as well as MLS technology for greater access control. The zSeries has advanced intrusion detection, and Common Criteria Security Certification allows for greater protection of intellectual assets.

Bullet-proofing the Data Centre Made Easier

IT managers who are familiar with the mainframe for their applications can now extend its capabilities as a secure vault for enterprise data and to begin to use it as a business integrator allowing greater flexibility and control, and as an intelligent business director that applies resources where they are most needed. Customers who have other applications running in multiple locations can begin to consolidate data onto a more secure space and take advantage of greater protection and control, freeing IT to pursue strategic activities.

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