IBM

z/OS Version 1 Release 10—A Preview

z/OS Version 1 Release 10 Preview: Raising the bar and redefining scalability, performance, availability and economics.

In today's world, IT is woven into almost everything we do. The demands on IT solutions are greater than ever—often requiring the delivery of more service, value or capabilities, in less time or with fewer resources. Accomplishing "more with less" can be achieved by adopting a platform solution that is designed to drive efficiencies and economies of scale; accommodate business needs through flexible, virtual and autonomic capabilities; help reduce the risk of lost productivity, downtime or security breaches; and enable business innovation through the extension of existing investments and adoption of newer technologies.

Maximize the return on your IT investment with z/OS®. The marriage of z/OS and System z™ platform delivers advanced scalability, resiliency, security, workload management and autonomic capabilities, while minimizing excesses and waste of system resources and operations. System z and z/OS re-define investment protection by going to great lengths to keep applications and data available, system resources secure, server utilization high and programming environments adaptable.

February 26, 2008, IBM previewed z/OS Version 1 Release 10. This release of the z/OS operating system plans to build on its leadership capabilities by not only enhancing time-tested technologies, but also by leveraging deep synergies with the new IBM System z10™ Enterprise Class (z10 EC) server and IBM System Storage™ family of products.

z/OS V1.10 and the new z10 EC server together deliver tremendous economies of scale and adaptability of resources. With support for up to 64* engines (available on z/OS V1.9) and up to 1.0 TB of real memory per LPAR (available on z/OS V1.8), your application and data serving requirements may not have to be partitioned on unnatural boundaries. Large (1 MB) pages (available with z/OS V1.9) are expected to reduce memory management overhead for exploiting applications. Just as important as the scale of the system is how it performs with that scalability. Planned for z/OS V1.10 and with the z10 EC server is HiperDispatch, a capability that can provide intelligent

dispatching of z/OS workloads, to help improve the performance for higher n-way systems. A new Capacity Provisioning Manager planned for z/OS V1.10 (and z/OS 1.9 with PTF) enables the z10 EC system to monitor itself and to activate or deactivate temporary capacity automatically. In the future, z/OS will allow authorized applications to query, change, and perform basic operational procedures against the installed System z hardware base—efficiently deploying server resources when needed.**

This release of z/OS and the IBM System Storage family of products together deliver improvements to scalability, availability and productivity. With z/OS V1.10, Extended Address Volume (EAV) is planned to support up to 262,668 cylinders (up to 223 GBs of addressable storage per volume). In the future, EAV intends to help simplify storage management by providing the ability to manage fewer, large volumes as opposed to many small volumes.** A new capability, Basic HyperSwap™, plans to provide a low cost, single site, high availability disk solution which allows the configuration of disk replication services using an intuitive GUI from z/OS**. The world-class z/OS Global Mirror disaster recovery solution is now enabled to exploit the IBM System z10 and

System z9® Integrated Information Processor (zIIP) specialty engine. The zIIP essentially becomes a z/OS data mirroring engine that can provide better price performance and improved utilization of resources at the mirrored site.

Availability is not only improved for storage and data. z/OS V1.10 intends to continue refining its error checking, fault tolerance, isolation, error recovery and diagnostic capabilities by introducing improved console processing, JES2 dynamic exit capability, automatic dump and re-IPL capability, new Health Check services, automatic restart of NJE connections, a new capability for tracking users of large amounts of fixed storage, as well as improvements in Parallel Sysplex® function.

z/OS V1.10 not only helps reduce the risk of downtime, but also can help reduce the risk of security breaches as well. z/OS System Integrity—IBM's long term commitment to protecting key z/OS system resources—together with enhancements to z/OS Security Server (RACF®), SSL, Public Key Infrastructure (PKI) Services and encryption,

can make z/OS the secure hub for your data and applications. With z/OS V1.10, the z/OS Communications Server takes network security to the next level with its plans to provide improvements to based networking components of NSS, IPSec and AT-TLS. Building on its history of Intrusion Detection Services (IDS), the z/OS Communications Server introduces Defensive Filtering services, which can automatically apply additional defensive filters in front of IP security filters for added protection and minimal disruption of services in the event of an attack.

Productivity is planned to be improved and operations simplified with z/OS V1.10 as well. This release plans to provide improvements in the areas of simplifying diagnosis and problem determination; network and security management; and overall z/OS, I/O configuration, sysplex and storage operations. Improvements include the Configuration Assistant for z/OS Communications Server, which adds file import capabilities and support for IP address group definition to make the Configuration Assistant more responsive to networking needs; Health Checker provides not only more checks for RACF, z/OS UNIX® System Services, XCF/XES,

and CINET, but it also provides support for log browse and saving data across IPLs, both of which can help improve analysis and problem determination; the Hardware Configuration Manager is to include support for configuration packages and importing and exporting I/O configuration data similar to that of HCD as well as improved named views support; and HCD will provide the ability to read and update an IODF by multiple users at the same time.

The IBM z/OS Management Facility provides a glimpse into the future for simplified systems management. The z/OS Management Facility intends to provide the infrastructure, services, and user interfaces to support a modern, Web-browser based management console for z/OS. This product intends to provide the base for future simplified system health monitoring with event analysis and problem management; workload management; network management, and data and storage management.**

z/OS is improved and updated over the years, viewing individual functional enhancements does not take in the full scope of the holistic nature of the platform. Taken together, the improvements provided by z/OS V1.10, the z10 EC, and storage can mean significant scalability, resiliency, security, workload management and price performance capabilities for your workloads. For example, focusing on DB2® for z/OS and IMS™ workloads can gain benefit from improvements from many, if not all the following: hashed DSAB searches; EAV; Basic HyperSwap; HiperDispatch; IBM System Storage DS8000™ series AMP (Adaptive Multistream Prefetching); and, z10 EC server's processors, memory, I/O and network bandwidth. IBM DB2 V9.1 for z/OS (DB2 9) new workloads can gain additional advantage from z/OS V1.10 additional XML exploitation of the zIIP specialty processor, and the z10 server's hardware implementation of decimal floating point functions.

z/OS V1.10 is the next step in the evolution of the System z mainframe. It raises the bar and redefines scalability, performance, availability and economics for the platform. It provides control over system resources, flexibility and autonomics for unforeseen demands, world-class security and availability, and deep synergies within the platform. z/OS provides a solid foundation for extending existing applications, adopting new technologies, and above all leveraging your IT investment.

Requires IBM System z servers

z/OS V1.10 requires z/Architecture® and only runs on IBM System z10, IBM System z9, and IBM eServer™ zSeries® (z890, z990, z800, z900) servers.

Migration

z/OS 1.10 is an important release for all z/OS 1.8 customers because it is the last z/OS release that you can migrate to in a single step. End of service for z/OS 1.8 is planned for September 2009.

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