

z/VM Update

- Important news about z/VM Version 5.4**
- Introducing z/VM Version 6.1**

...and beyond



Trademarks

The following are trademarks of the International Business Machines Corporation in the United States and/or other countries.

IBM*	System z10
IBM Logo*	Tivoli*
DB2*	z10
Dynamic Infrastructure*	z10 BC
GDPS*	z9
HiperSockets	z/OS*
Parallel Sysplex*	z/VM*
RACF*	z/VSE
System z*	

* Registered trademarks of IBM Corporation

The following are trademarks or registered trademarks of other companies.

OpenSolaris, Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both. Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both. INFINIBAND, InfiniBand Trade Association and the INFINIBAND design marks are trademarks and/or service marks of the INFINIBAND Trade Association. UNIX is a registered trademark of The Open Group in the United States and other countries. Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

* All other products may be trademarks or registered trademarks of their respective companies.

Notes:

Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ratios stated here.

IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply.

All customer examples cited or described in this presentation are presented as illustrations of the manner in which some customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics will vary depending on individual customer configurations and conditions.

This publication was produced in the United States. IBM may not offer the products, services or features discussed in this document in other countries, and the information may be subject to change without notice. Consult your local IBM business contact for information on the product or services available in your area.

All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

Information about non-IBM products is obtained from the manufacturers of those products or their published announcements. IBM has not tested those products and cannot confirm the performance, compatibility, or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Prices subject to change without notice. Contact your IBM representative or Business Partner for the most current pricing in your geography.

Agenda

- IBM Systems Director
- z/VM Version 5.4
- z/VM Version 6.1
- Statements of Direction

IBM Systems Director VMControl Image Manager for Linux on System z Version 2.1

Announced July 21, 2009; Available July 24, 2009



- VMControl Image Manager is a plug-in to IBM Systems Director V6.1
 - Effectively replaces the “z/VM Center” extension of IBM Director V5.20
- Provides support to manage and automate the deployment of virtual images from a centralized location
 - A virtual image consists of an operating system instance and the software stack, such as middleware and applications, running on that operating system
- VMControl Image Manager provides a graphical interface to create and deploy Linux images on z/VM and AIX images on Power systems
 - Definition of these system images is based on the industry-standard Open Virtualization Format (OVF) specifications – facilitates importation of virtual images
 - Deploy an all-in-one solution instead of OS, middleware, and application piece parts
 - Clone already-tested system configurations
 - Propagate virtual image updates to all instances
- IBM Systems Director and VMControl Image Manager help support a Dynamic Infrastructure
 - Helps improve responsiveness to changing business needs
 - May increase operational productivity
 - Can help reduce service and support costs



60-day Free Trial
Available via download

z/VM Version 5.4 Functional Enhancements

- Port isolation security that provides the ability to restrict guest-to-guest communications within a Virtual Switch (VSWITCH) by exploiting OSA-Express2 and OSA-Express3 QDIO data connection isolation.
 - VM64463 (CP), PK67610 (VSWITCH controller), OSA LIC October 2008 or higher

- Linux guest use of Dynamic Storage Reconfiguration
 - VM64524

- SSL server that operates in a CMS environment instead of requiring a Linux distribution
 - PK65850+

- Support for the HCD WWPN prediction tool, CDBSCONF
 - VM64579

- Network driver needed by OpenSolaris
 - VM64471

z/VM Version 5.4

Functional Enhancements

- Support for the IBM FlashCopy SE feature on the IBM DS8000 which provides a space-efficient snapshot capability that can greatly reduce the storage capacity needed for point-in-time copies.
 - VM64449
- Multiple file dump support
 - VM64495
- Support for the IBM System Storage Enterprise 3592 Tape Controller Model C06 and 3592 Tape Drive Model E06
 - VM64459 (CP), VM64458 (DFSMS/VM)
- Display encryption and solid-state indicators for IBM DS8000
 - VM64650
- DFSMS/RMS support for disk-only configuration of IBM Virtualization Engine TS7720
 - VM64657 (via z/VSE)

z/VM Version 5.4 Marketing and Service Updates

- End of Service for z/VM V5.4 has been extended to September 30, 2013
 - Expect software support until end of hardware service for System z9

- Marketing of z/VM V5.4 will continue after the availability of z/VM V6.1
 - Clients with pre-z10 systems and unable to move to z10 technology in a timely manner can upgrade to or acquire z/VM V5.4
 - Support of secondary hardware market
 - IBM will provide at least 3 months notice before z/VM V5.4 is withdrawn from marketing

z/VM Version 6.1

The Foundation for System z Virtualization Growth

Previewed July 7, 2009; Planned Availability: Q4 2009

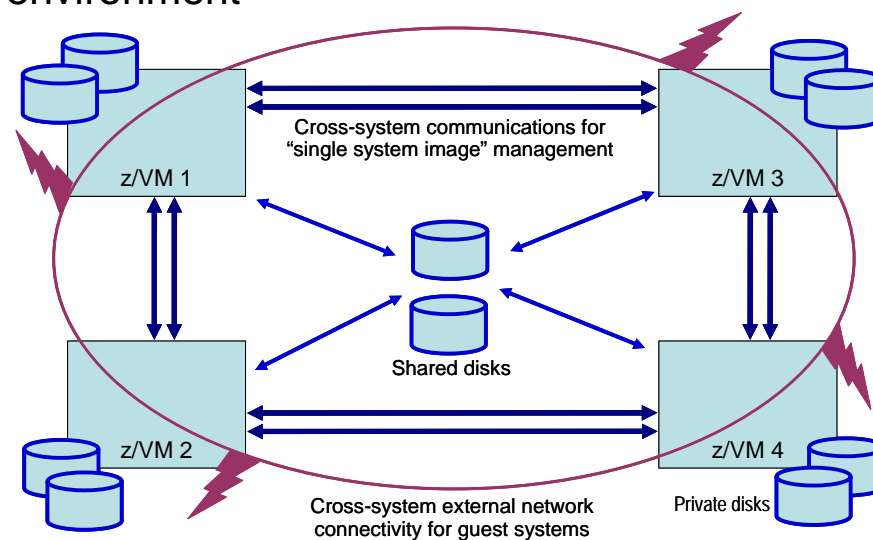
- Establishes a new z/VM technology base for IBM System z10 and future systems
 - Acknowledges the highly attractive economics of workload consolidation on z10 servers
 - z/VM V6.1 only operates on z10 EC, z10 BC, and future generation servers
 - Allows optimization of z/VM function for greater business value on newer hardware
- New function and packaging in z/VM V6.1
 - Exploitation of the System z10 server cache management instructions to help improve the performance of z/VM virtual networking
 - Better integration with IBM Systems Director by shipping the Manageability Access Point (MAP) agent with z/VM V6.1 for easier installation of the agent
 - Inclusion of the functional enhancements previously delivered in the z/VM V5.4 service stream (most in base + a few SPEs)
- Preview announcement includes statements of direction for future z/VM support
 - z/VM hypervisor clustering support: “Single System Image”
 - Linux virtual machine mobility support: “Live Guest Relocation”

z/VM Statements of Direction

Clustered Hypervisor Support and Guest Mobility

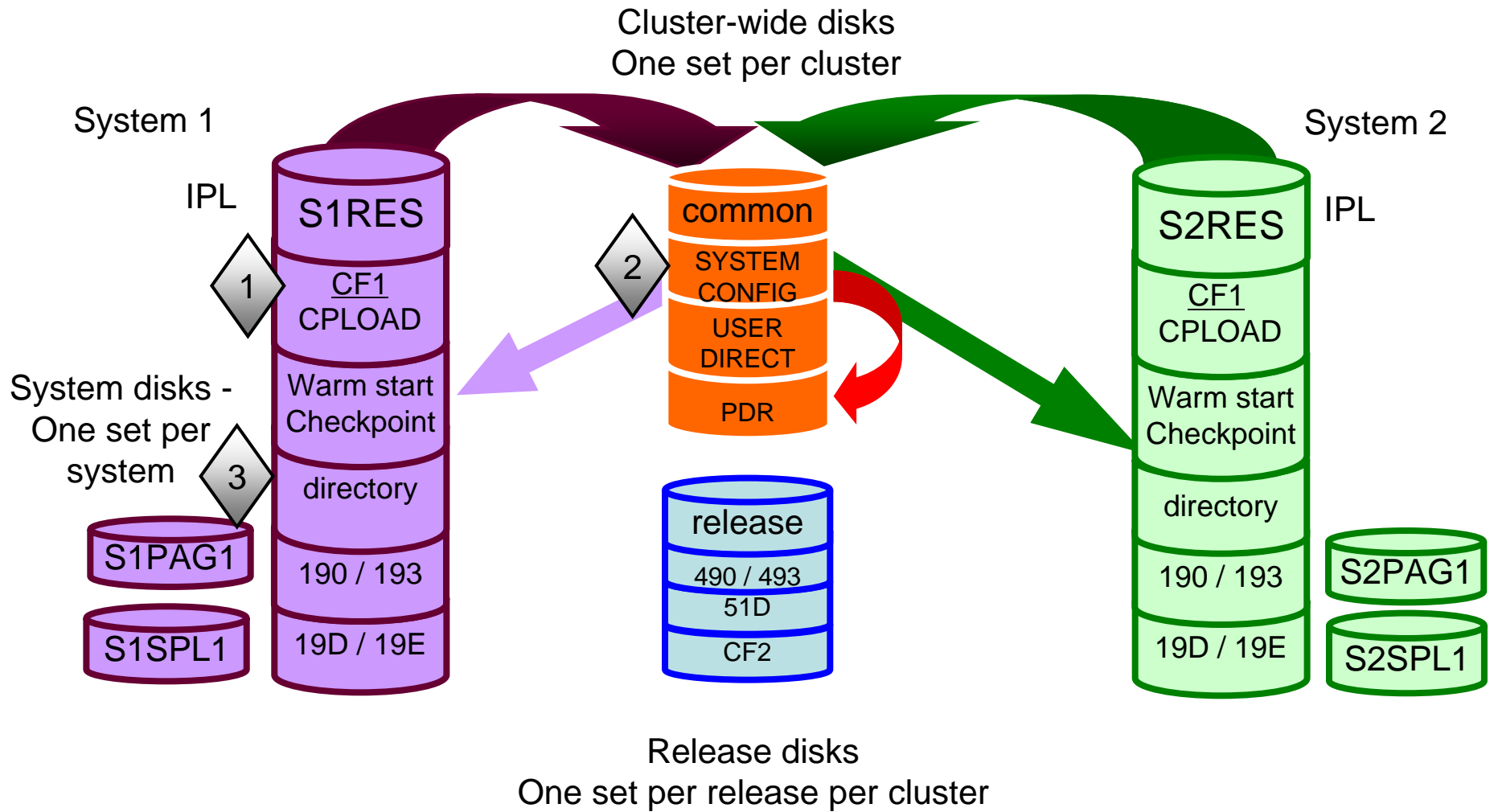
Overview of Planned New Function

- Clients can cluster up to four z/VM systems in a **Single System Image (SSI)**
- Provides a set of shared resources for the z/VM systems and their hosted virtual machines
- Users can run z/VM system images on the same and/or different System z10 servers
- Simplifies systems management of a multi-z/VM environment
 - Single user directory
 - Cluster management from any system
 - Apply maintenance to all systems in the cluster from one location
 - Issue commands from one system to operate on another
 - Built-in cross-system capabilities
 - Resource coordination and protection: network and disks
- Dynamically move Linux guests from one z/VM system to another with **Live Guest Relocation**
 - Reduce planned outages; enhance workload management
 - Non-disruptively move work to available system resources **and** non-disruptively move system resources to work



Note: All statements regarding IBM's plans, directions, and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

SSI Cluster – A closer look



Thanks!