



LSU Helsinki

z/OS V1R7 Update

Nordic
Large Systems Update Seminar
2005

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LSU 2005

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e-business logo*	Multiprise*	VTAM*
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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.

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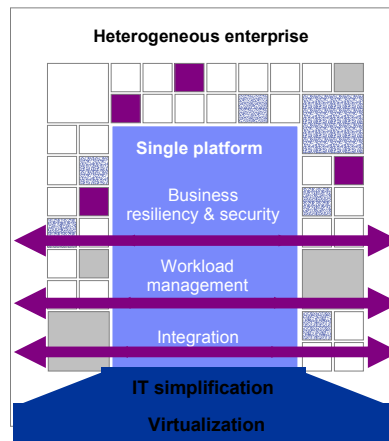
z/OS – IBM's flagship mainframe operating system Providing the difference for On Demand Business

- **z/OS – the mainframe operating system that delivers**

- A highly available and secure base for integrating applications
- Resources optimized to meet business priorities
- Scalability for data and transaction growth
- Robust and resilient networking
- Business resiliency

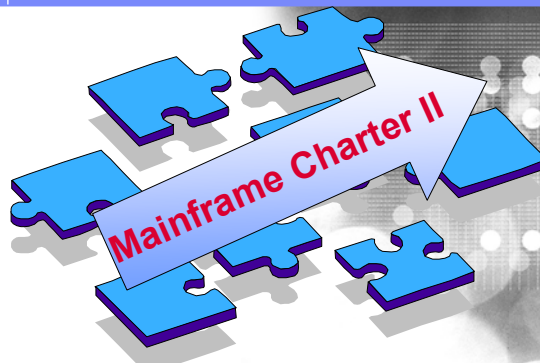
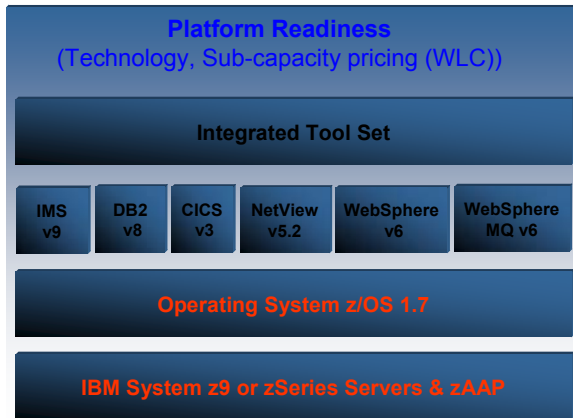
- **With new directions**

- Simplifying z/OS management
- Extending z/OS to help manage your mixed environment

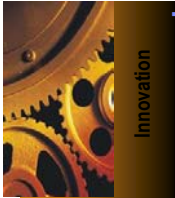


Platform readiness ...
Be ready for the next business opportunity!

- **Be positioned for a competitive edge**
 - Business resiliency
 - Security compliance
 - Business process integration
 - Rapid deployment of enterprise-wide solutions
 - Reuse of skills and resources
 - Leverage, extend and integrate core applications



Mainframe Charter: delivering new on demand capabilities



Innovation

Provide leadership in innovation to enhance the use of IBM eServer zSeries to support increasingly integrated and flexible business processes for the on demand business.*

On demand capability Roadmaps:

Business Integration

- z/OS 1.6 and zAAP exploitation
- Communication Controller on Linux (2005)

Business resiliency & security

- GDPS xDR (2004)
- GDPS HyperSwap Manager (2005)
- Common Information Model (2005)

Business Policy Management:

- eWLM for z/OS (2004)
- eWLM for Linux (2005)
- Common Information Model
- IBM Director Multiplatform (2005)
- TBSM and TEC for managing business service levels
- TBSM and TEC for managing business service levels of composite application



Value

Enhance the value proposition and lower the cost of computing of zSeries solutions in a way that is compelling, clear, and consistent.*

Flexible and Responsive pricing Models:

- Subcapacity pricing for key platform Software
- Broad portfolio of Capacity on Demand offerings

zSeries ServerProven Rebate Offering

Offerings for Integration and Simplification

- zAAP capacity with no IBM SW Cost
- Application transformation and integration services
- Scorpion Studies

Offerings for Resiliency and Security

- GDPS®/PPRC Implementation Services
- GDPS® HyperSwap Manager – 75% saving on special SA and netview suite
- Base zSeries and z/OS Security workshops

Offerings for Business Policy Mgmt and Optimization

- End to End Systems Management Services
- IT Optimization Solution Offering
- 12-Step Strategic Virtualization Assessment



Community

Support programs designed to foster vitality in the zSeries community, helping to promote a strong application portfolio and world-class support services.*

Broadening ecosystem to enable customer with support and skills

- Greater support to enable participation
- Over 150 new ISVs
- ISV adopting subcapacity pricing models

FSS Reference Architectures

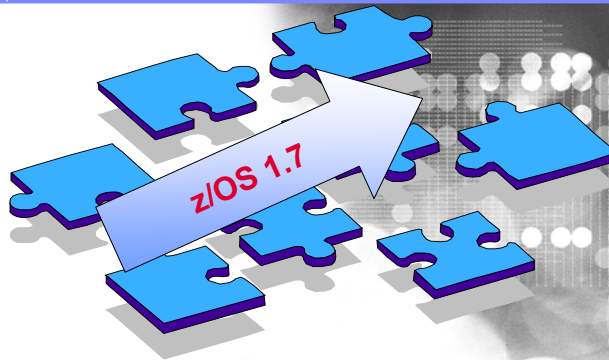
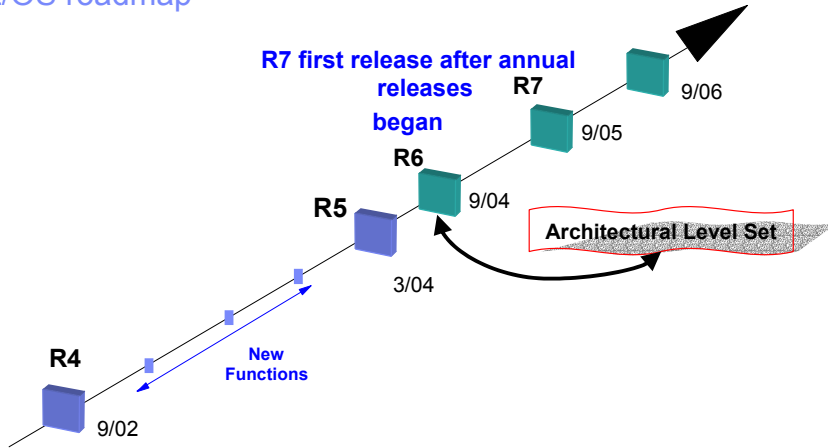
- Live banking demo in MOP

Exponential increase in Scholars Program

- 70 Universities enrolled
- Target of 20,000 new skills by 2010



z/OS roadmap



z/OS 1.7 console restructure stage 1B



- Console restructure stage 1B is the continuation of stage 1 (delivered in z/OS V1R4.2):
 - EMCS console removal
 - Monitor message independence
 - Allows messages not to be routed to a console
 - Consoles query interface
 - Internal and external gets a way to obtain "retained messages" data
 - 1-byte console ID elimination
 - TRACK command elimination
 - Incompatible with the new Console Restructure infrastructure (to be delivered in a future release. TRACK and STOPTR commands are disabled since there are no known exploiters of this command. Alternative: \$TA and \$VS commands)

z/OS 1.7 JES2 enhancements

**content**

- NJE over TCPIP
 - TCP/IP is the standard today, already used by OS/400, zVSE and zVM
 - Solutions involving SNA over IP (such as Enterprise Extender) do not perform well (SNA architecture OH) – Interoperability issues
 - Availability is planned for 1Q 2006
- RAS enhancements
- 64 track spool support
- Migration coexistence considerations
- JES2 compatibility withdrawal
- SDSF support for JES2 resources

z/OS 1.7 Health Checker

Integrated with z/OS 1.7



- IBM Health Checker for z/OS integrated into z/OS 1.7
 - Shipped in its own FMID
 - Current and future checks are shipped with the individual components.
 - Additional checks shipped in the service stream
 - You can develop your own checks
 - Checks may be provided by vendors/3rd parties
 - IBM Health Checker for z/OS can coexist with the web deliverable proto-type that has been available for a few years

- SDSF support to modify checks and view output

Health Checker history

Very popular Health Checker prototype to avoid outages

- Multi-system outage analysis
 - 15-20% multi-system outages attributed to Setup/Config
- Tool developed by ITSO to address component configuration and setup errors commonly made by installations
- **“Unsupported” tool available via web download – prototype:**
 - Implemented as Batch job
 - Checks integrated into tool
 - Configuration/customization related component warnings
 - 37 Component checks available Feb-July of 2003
 - 3000+ downloads to date

Health Checker objective

Identify potential problems before they impact availability or cause outages

- Check current active z/OS and sysplex settings
 - Check definitions for a system and compare the values to those suggested by IBM or defined by you
 - Not a diagnostic or monitoring tool
 - Runs continuously to find deviations from best practices
 - Produces output in the form of detailed messages
 - Indicates both potential problems and suggested actions
 - Does not mean that Health Checker has found problems that you need to report to IBM!
 - Messages simply informs you of potential problems so that you can take action on your installation

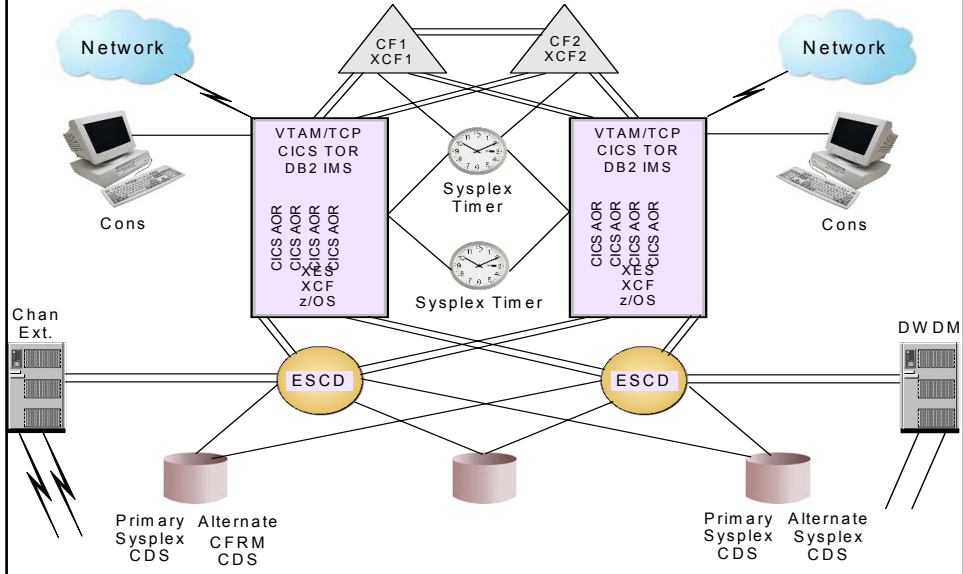
Health Checker checks

Products or components that provide checks – more coming

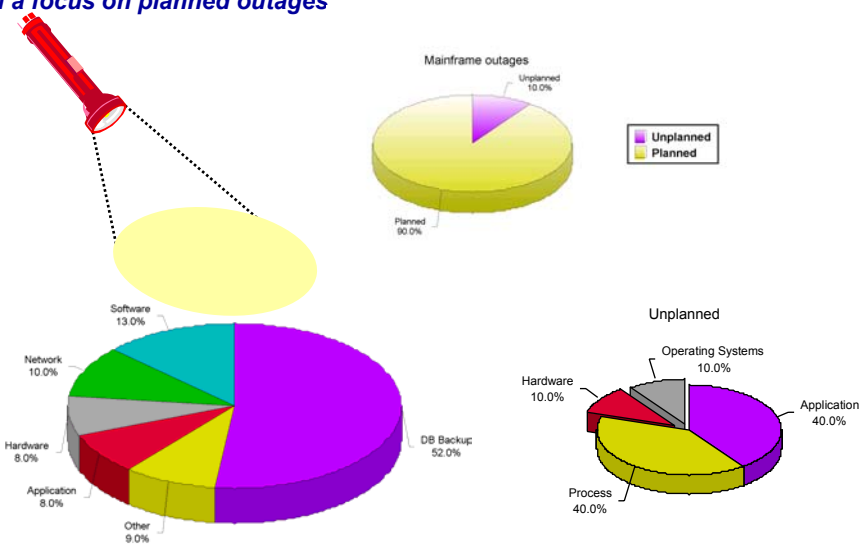


- Consoles
- GRS
- RACF
- RRS
- RSM
- USS
- VSM
- XCF
- Others: APF libraries, LINKLST, LINKLIB, APFLIST

Parallel Sysplex: the big picture



Outage avoidance with a focus on planned outages



Source: Gartner Group

IBM Workload Manager enhancements for z/OS 1.7 *at a glance*

- WLM adjust to dynamic CP speed adjustment
 - Automatic policy reactivation for z890 within IPL
- WLM enhanced support for sub capacity pricing
 - Actual CPU time consumed without wait time for VM guests
- DB2 latch contention relief
 - Short time SRM/WLM ENQ promotion
- **Enhanced computation of available system capacity**
 - Used for WL balancing algorithms (WLM routing services)
- Support of multiple z9 Subchannel Sets
- Enhanced support for EWLM

SRM/WLM 1.7 short term enqueue promotion function

- Available for z/OS 1.4 and upwards
 - Provide fixed boost of CPU service units to resource holder
 - Not related to ERV value
 - OA08949: New function APAR
- Two usage scenarios to address DB2 (V8 and V7) latch contention:
 - **May be a problem on highly utilized systems running DB2 work (with a low WLM priority)**
 - **WLM 1.7 provides promotion (10 CPU service units)**
 - **Does not require to signal the release (good for performance)**
 - **DISPLAY THREAD SERVICE (WAIT)**
 - Issue a priority boost for agents holding latch for 2x IRLM timeout limit or a minimum of 1 minute (PK01230)

New ITSO RMF Redbook (SG24-6645)

IBM
SG24-6645-00

Effective zSeries Performance Monitoring using Resource Measurement Facility (RMF)

Review of the traditional facilities

Learn about all the new features
and how their setup

How to use RMF for
performance monitoring



Pierre Cassier
Risto Karhunen
Peter Malsland
Michael Textfil

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“Hot Topics” 2005 z/OS Newsletters

- Hot Topics Newsletter #13 August 2005
 - GDPS
 - IBM Health Checker for z/OS
 - Restructuring your consoles
 - IBM Academic Initiative
 - ServerPac
 - and much more...
- Hot Topics Newsletter #12 Feb. 2005
 - Vita-meata-vegamin for z/OS
 - Handling diverse workloads
 - z/OS Load balancing advisor
 - 64-bit dumps
 - IMS Version 9
 - SNMPv3
 - and much more...



Hot Topics Newsletters, online at:

www.ibm.com/servers/eserver/zseries/zos/bkserv/hot_topics.html

Useful zSeries Websites

▪ IBM zSeries support site

✓ <http://www-1.ibm.com/servers/eserver/support/zseries/>

✓ Technical information

- Authorized program analysis report
- Service Bulletins
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