z/OS Update

Jeff Magdall
z/OS PDT Lead
magdall@us.ibm.com

February 4, 2013
Topics

• Update on 2012
  – z/OS Version 2 Statement of Direction
  – zEC12 Announcement

• February 5th Preview
  – New Solutions Announcement
  – z/OS 2.1 Preview
  – Ecosystem

• Links to more info
z/OS 2 Year Release Cycle

**Introduced Last March at SHARE**

- **Shift z/OS to a 2 year release cycle – now to provide immediate relief to clients**
  - Better aligns with client needs and trends
  - Opportunity for us to put more complete function in a release

- **Version 2.1 targeted to deliver in 2H2013**
  - Release delivery cycle is planned to be every 2 years, in the second half of that year.
  - Will continue to deliver key hardware support & updates in-between releases
  - Maintain N-2 release migration (accommodate a 2 or 4 year migration cycle)
  - 5 Year Support with optional fee based service extension to accommodate migration
  - z/OSMF will be on the same release and service cycle
  - Minimum supported HW levels (z9 server or later, and 3990-3 controller or later)
  - R12 Support extended to 4 years, R13 Support extended to 5 years; bridges v2 migrations

---

Announced via Statement Of Direction on April 11, 2012
zEC12 Launched August 28, 2013

Significant value and innovation delivered through z/OS R13 updates

<table>
<thead>
<tr>
<th>New and enhanced instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM zAware</td>
</tr>
<tr>
<td>OSA-Express4S (GbE LX and SX,</td>
</tr>
<tr>
<td>1000BASE-T, 10 GbE LR and SR)</td>
</tr>
<tr>
<td>FICON Express8S</td>
</tr>
<tr>
<td>Parallel Sysplex InfiniBand (</td>
</tr>
<tr>
<td>PSIFB Coupling Links</td>
</tr>
<tr>
<td>High Performance FICON</td>
</tr>
<tr>
<td>CPU Measurement Facility</td>
</tr>
<tr>
<td>CFCC Level 18 enhancements</td>
</tr>
<tr>
<td>Java exploitation of transac-</td>
</tr>
<tr>
<td>tional memory</td>
</tr>
<tr>
<td>Exploitation of new hardware</td>
</tr>
<tr>
<td>instructions – XL C/C++ ARCH(</td>
</tr>
<tr>
<td>10) and TUNE(10)</td>
</tr>
<tr>
<td>Common Criteria Evaluation</td>
</tr>
<tr>
<td>Assurance Level 5+ (EAL5+)</td>
</tr>
<tr>
<td>certification</td>
</tr>
<tr>
<td>zEnterprise BladeCenter</td>
</tr>
<tr>
<td>Extension (zBX) Model 003</td>
</tr>
<tr>
<td>support of general purpose</td>
</tr>
<tr>
<td>blade servers and optimizers</td>
</tr>
<tr>
<td>zBX-003 with IBM WebSphere</td>
</tr>
<tr>
<td>DataPower Integration Appliance X150 for zEnter-</td>
</tr>
<tr>
<td>prise (DataPower X150z)</td>
</tr>
<tr>
<td>zBX-003 with select IBM Blade-</td>
</tr>
<tr>
<td>Center PS701 Express blades,</td>
</tr>
<tr>
<td>or IBM BladeCenter HX5 (7873)</td>
</tr>
</tbody>
</table>

| Five hardware models          |
| 5.5 GHz processor chips        |
| **Up to 100-way on z/OS.11 and higher** |
| Doubled HSA – 32 GB            |
| **Improved processor cache design** |
| Improvements to pre-fetch instructions |
| Up to 3TB real memory (1TB per LPAR) |
| Improved availability with Redundant Array of Independent Memory (RAIM) |
| Industry standard Peripheral Component Interconnect Express Generation 2 (PCle Gen2) I/O drawer |
| **Flash Express (Storage Class Memory)** |
| 1 MB Pageable Large Pages      |
| Dynamic reconfiguration support for Flash Express¹ |
| 2 GB Large Page Support¹       |
| Optional PLPA, COMMON page data sets¹ |
| Crypto Express4S cryptographic coprocessors and accelerators |
| New support for PKCS #11 Hardware Security Module (HSM) |
| DUKPT for MAC and Data Encryption |

(z/OS support in blue)
System z
Introducing the new and updated IBM zEnterprise solutions

IBM System z is committed to helping clients create business value through new solutions, key technologies and continued innovation.

Cloud Ready
Highly secure and scalable enterprise cloud

- IBM Intelligent Operations Center for Smarter Cities™
- z/VM® 6.3 Preview

Data Ready
Enterprise data repository that integrates operational analytics for accelerated insight

- IBM DB2® Analytics Accelerator V3.1
- IBM Smarter Infrastructure for Social Services – Curam on IBM zEnterprise
- IBM Smarter Analytics Anti-Fraud Infrastructure for zEnterprise
- IBM Enterprise Asset Management (Maximo) for Government
- IBM zEnterprise Smarter Analytics for Retail
- z/OS® 2.1 Preview

Security Ready
Unmatched security for critical business processes, applications and data

- IBM Enterprise Key Management Foundation
# zEnterprise Industry Solutions for a Smarter Planet

## Smarter Planet® – Industry Solutions

### Banking
- IBM Financial Transaction Manager on zEnterprise
- SAP Bank Analyzer on zEnterprise
- IBM Core Banking Solution on zEnterprise
- FSS Business Intelligence and Data Analytics Solution
- IBM Smarter Analytics Anti-Fraud Infrastructure for zEnterprise

### Insurance
- IBM Smarter Analytics: Anti-Fraud, Waste and Abuse Solution for Insurance
- IBM Genelco® Insurance Administration Solution
- IBM zEnterprise Insurance Integration Hub

### Government / Smarter Cities
- IBM zEnterprise Starter Edition for Cloud for Government
- IBM Intelligent Operations Center for Smarter Cities
- IBM Smarter Infrastructure for Social Services - Curam on zEnterprise**
- IBM Enterprise Asset Management (Maximo) for Government**

### Healthcare / Life Sciences
- IBM Smarter Analytics Signature Solution: Anti-Fraud, Waste and Abuse
- IBM Health Plan Integration Hub

### Retail
- IBM zEnterprise Smarter Analytics for Retail**

---

★★ Feb. 13, 11 am ET: Joint zSW/zHW client webcast with Ray Jones & Jose Castano. Register today★★
What’s **New** in z/OS V2.1 & z/OSMF 2.1

### Cloud Ready
**Efficiency at Scale**
- Cloud-like scale to support huge volumes of workloads through server improvements (100 way)
- Availability/performance through innovations (Flash Express and Pageable large pages, 2 GB pages)
- Optimized transactional performance through improvements to multi-threading (Transactional Execution enhancements, System Logger enhancements)

### Data Ready
**Operational Analytics**
- Designed for efficiency—Optimized data placement, access and retrieval to reduce costs
- Improve catalog sharing with VSAM record level sharing within a Parallel Sysplex
- zFS optimized file structures for improved scalability
- Optimized management and performance improvements for FICON® channels
- Improved batch parallelism. DFSMSHsm™-migrated data sets allocated by batch jobs recalled in parallel vs. sequentially

### Security Ready
**Ultimate Security**
- Get access to System z encryption from Linux (crypto as a service)
- Strengthened auditing and reporting for Digital Certificates & Health Checks
- Industry-ready standards support (NSA Suite B, TLS 1.2, new certificate validation support)
- Improved support for Enterprise PKCS #11 processing

---

**Powered by a Superior Management Foundation**
**Management built into the fabric of z/OS**
- Dramatically reduce resource requirements and faster startup with WebSphere Liberty profile for z/OS
- Manage software currency with new Software Inventory capability
- Improve order and quality of task completion with innovative Workflow infrastructure
- Get enhanced security configuration support in Configuration Assistant
Software Developers supporting z/OS 2.1

… And the list continues to grow
z/OS Tools

*Expanding the ecosystem and community*

- Rocket Software plans to port and offer select tools to z/OS
  - Tools and technical support will be available directly from Rocket Software
  - Rocket Software intends to offer optional enhanced technical support for customers who require higher levels of support

- Rocket Software plans include current versions of tools offered today in IBM’s Ported Tools offering: perl, cURL, bzip2, sudo, and PHP
  - These tools are intended to be available before the General Availability of z/OS V2.1
  - Rocket Software plans to offer additional tools based on customer demand
  - IBM and Rocket Software are working together closely to leverage IBM’s experience and previous work enabling these tools on z/OS

- IBM intends to provide links from the IBM Tools web site to these current versions from Rocket Software as they become available
Thank You!

For your Time…
For your Passion…
For your Business…

For More information on the z/OS 2.1 Preview, visit the z/OS website at:
www.ibm.com/systems/z/os/zos/
Additional Information

• **z/OS Page**
  http://www.ibm.com/servers/eserver/zseries/z/OS/

• **Favorites for System z**
  http://www.ibm.com/servers/eserver/zseries/z/OS/zfavorites/

• **z/OS Internet Library**
  http://www.ibm.com/servers/eserver/zseries/z/OS/bkserv/

• **IBM System z page**
  http://www.ibm.com/systems/z/

• **IBM Redbooks**
  http://www.redbooks.ibm.com/