z/OS Migration: z/OS 1.4 to z/OS 1.6

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Special thank you to Marna Walle for sharing her foils.

Trademarks

e - logo	DFSMSdfp	IBMLink	ProductPac
e-business	DFSMSdss	IMS	RACF
z/Architecture	DFSMShsm	IP PrintWay	RMF
z/OS	DFSMSrmm	Language Environment	RS/6000
z/VM	Encina	Multiprise	S/390
zSeries	DFSORT	MVS	S/390 Parallel Enterprise Server
AnyNet	ESCON	MVS/ESA	SecureWay
AD/Cycle	First Failure Support Technology	Net.Data	System/390
BookManager	FunctionPac	NetSpool	SOM
C/370	FFST	Open Class	SOMobjects
CICS	FICON	OpenEdition	SP
COBOL/370	GDDM	OS/2	VisualAge
DB2	Hiperspace	OS/390	VM/ESA
DB2 Universal Database	Infoprint	Parallel Sysplex	VSE/ESA
DFS	Intelligent Miner	Processor Resource/Systems Manager	VTAM
DFSMS/MVS	IBM		WebSphere

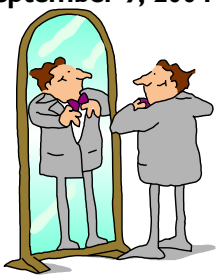
Domino (Lotus Development Corporation)
Java (Sun Microsystems, Inc.)
JDBC (Sun Microsystems, Inc.)
JDK (Sun Microsystems, Inc.)
Lotus (Lotus Development Corporation)
Notes (Lotus Development Corporation)
Pentium (Intel)
Tivoli (Tivoli Systems Inc.)
UNIX (X/Open Company Limited)
Windows (Microsoft Corporation)
Windows NT (Microsoft Corporation)

Topics

- **Content of z/OS Version 1 Release 6**
  - Elements and Features Added, Changing, and Withdrawn
- **z/OS R6 Ordering and Deliverables**
  - Products Related to z/OS R4
- **z/OS Policies**
  - z/OS Coexistence-Migration-Fallback
- **Positioning for z/OS R6**
  - Ensuring System Requirements are Satisfied
    - Driving System Requirements
    - Target System Requirements
  - Migrating to z/Architecture
    - Hardware First Path and Software First Path
  - Coexistence Requirements
  - Migration actions You Can Do Now
- **Summary**

Similarities Between z/OS V1.4 and z/OS V1.5

- **End of Marketing Date**
  - z/OS R4 is orderable in ServerPac and CBPDO **until September 9, 2004**
  - z/OS R5 is orderable in ServerPac and CBPDO from March 12, 2004 **until September 9, 2004**
- **End of Service Date**
  - z/OS R4 end service support has been announced to be **March 31, 2007**
  - z/OS R5 is planned to be end of service support on **March 31, 2007**
- **Architecture Level Set**
  - Both z/OS R4 and z/OS R5 run on the same servers.
  - (An Architecture Level Set occurs on z/OS R6.)
- **z990 Exploitation Support**
  - *z990 Exploitation* is incorporated into z/OS R4 (as of February 24, 2004) and available on z/OS R4 before then.
  - *z990 Exploitation* is incorporated into z/OS R5.
  - *z990 Cryptographic Support* and the *z990 and z890 Enhancements to Cryptographic Support* web deliverables are applicable to both z/OS R4 and z/OS R5 (and z/OS R6). It is **not** incorporated into *either* z/OS R4 or z/OS R5 (or z/OS R6 for that matter).
- **z/OS R4 Functionality**
  - z/OS R4 functions are incorporated into z/OS R5 (and also in z/OS R6)



z/OS

- **Program Number: 5694-A01**
- **From an installation/migration perspective it:**
  - Contains Elements and optional priced/unpriced Features
  - Is delivered in customized offerings
    - ServerPac
    - Customized Fee Deliverables
    - CBPDO

z/OS V1R6 Base Elements and Optional Features Changing (from V1R4)

z/OS R4 Elements

- BCP
- C/C++ without Debug
- Communications Server
  - IP and SNA
- *Communications Server Security Level 3*
- Cryptographic Services
  - ICSF (FMID HCR770A)
  - PKI Services
  - SSL
- DFSMSdfp
- DFSMSdss
- DFSMShsm
- DFSMSrmm,
- DFSMStvs
- DFSORT
- Distributed File Service
- HCM
- HLASM (V1R5)
- HLASM Toolkit (V1R5)
- Infoprint Server
- Integrated Security Services*
  - Enterprise Identity Mapping
  - LDAP Server
  - Network Authentication Service
- ISPF
- JES2
- JES3
- Language Environment
- Library Server
- msys for Operations
  - System Automation (part of V2R3)
- Network File System
- RMF
- Run-Time Library Extensions*
- SDSF
- Security Server
  - RACF
- SMP/E (V3R3)
- TSO/E
- *z/OS Security Level 3*
  - *LDAP Security Level 3 **
  - *Network Authentication Service Level 3*
  - *SSL Level 3*
- z/OS UNIX
  - Application Services
  - Integrated Call Level Interface

KEY:
- **Black** (in **bold**) are base elements
- **Green** (also in **bold**) are optional priced features
- ***Brown*** (also in ***italics***) are optional unpriced features with export controls
- * indicates a new element since z/OS R4
- _ indicates this element changed in z/OS R6 **(from z/OS R5)**
- This element changed in z/OS R6 **(from z/OS R4)**

All other elements not listed have not changed since z/OS R4

Where are they now since z/OS V1.4?

- **Cryptographic Services:**
  - PKI Services (formerly from Security Server and was licensed with the base)
  - ICSF
  - OCSF
  - System SSL
- ★**Integrated Security Services**
  - ★Enterprise Identity Mapping (introduced as a PTF on z/OS R4)
  - DCE Security Server (formerly from Security Server and was licensed with the base)
  - Firewall Technologies (formerly from Security Server and was licensed with the base)
  - LDAP Server (formerly from Security Server and was licensed with the base)
  - Network Authentication Service (formerly from Security Server and was licensed with the base)
  - OCEP (formerly from Security Server and was licensed with the base)
- ★**Run-Time Library Extensions**
  - ★Common Debug Architecture
  - UNIX System Lab I/O Stream Library and Complex Math Library (formerly part of C/C++ IBM Open Class Library)
  - IBM Open Class DLLs (formerly part of C/C++ IBM Open Class Library)
- **Security Server:**
  - RACF
- ★**z/OS Security Level 3**
  - ★LDAP Server Security Level 3
  - Network Authentication Service Level 3 (formerly its own feature Security Server Network Authentication Service Level 3)
  - OCSF Security Level 3 (formerly its own feature)
  - System SSL Security Level 3 (formerly its own feature)

Elements and Functions Withdrawn from z/OS V1 R4

Communications Server NPF feature	Optional Unpriced Feature - now incorporated into the Communications Server base element. Note, however, that Infoprint Server is IBM's strategic method for providing this function.
RDBM DB2 Backend (in LDAP Server)	Licensed with the Base in Security Server - migrate to the enhanced TDBM DB2 backend.

Elements and Functions Withdrawn from z/OS R5

C/C++ IBM Open Class Library	Base Element - use the C++ Standard Library (shipped with Language Environment) instead
C/C++ with Debug Tool	Optional Feature - use z/OS R5 C/C++ without Debug Tool feature and also the independent standalone program product - IBM Debug Tool for z/OS V4.1 (5655-L24).
OAM support for Filenet 9246, optical libraries, 9247 optical drives, and 12" optical media (from DFSMSdfp)	Base Element - if optical is required, replace Filenet devices and media with IBM 3995 optical devices and media. If optical is not required, use tape media or DB2 tables on disk.
IBM License Manager	Base Element - use the Sub-Capacity Reporting Tool (SCRT) for subcapacity software pricing

Elements and Functions Withdrawn from z/OS R6

C/C++ ISPF panels (from C/C++)	Priced Feature - invoke the C/C++ compiler via UNIX, JCL, or TSO/E.
Run-time Library Services (RTLS) (from Lang Env)	Base Element - no longer required due to stability and upward compatibliity
Dynamic Link Library (DLL) Rename Utility (from Lang Env)	Base Element - no longer needed due to C/C++ DLLs being licensed with the z/OS base
SMIv1 version of the IBM MVS Enterprise-specific MIB module (from Communications Server)	Base Element - if you want to continue to use SMIv1, publicly available available tools can convert SMIv2 to SMIv1
DCE Application Support	Base Element - no replacement necessary. Evaluate WebSphere for similar function
Encina Toolkit Executive	Base Element - no replacement offered. Marketplace has moved to other technologies
Text Search	Base Element - available via web deliverable if still necessary for certain usage

Functions Planned to be Withdrawn in z/OS R7...

JES2 "compatibility" R4 mode (from JES2)	Base Element - to avoid a cold start, you must $ACTIVATE to convert the JES2 checkpoint to z2 mode before installing z/OS R7
JOBCAT and STEPCAT facilities (from DFSMSdfp)	Base Element - any remaining JCL that use JOBCAT or STEPCAT must change
Support for ISAM data sets (from DFSMS)	Base Element - ISAM Compatibility Interface will still be provided (which allows you to run an ISAM program against a VSAM KSDS data set)
OS/390 R10 level of the C/C++ compilers (from C/C++)	Priced Feature - move to the ISO 1998 Standard level of the compilers (introduced in z/OS R2)
z/OS Optional Source media feature	(not an element, an z/OS orderable feature)

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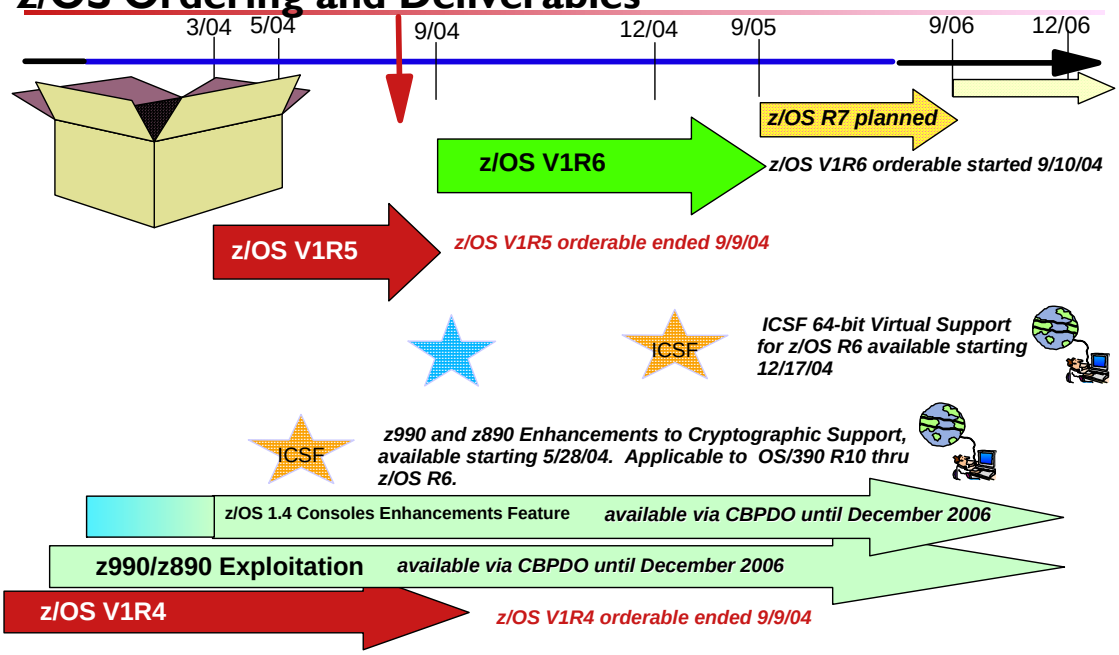
Functions Planned to be Withdrawn *in the future*...

Bind DNS 4.9.3 (from Communications Server)	Base Element - implement BIND 9.2.0 as a replacement (available since z/OS R4)
OROUTED (from Communications Server)	Base Element - use OMPROUTE as the dynamic routing daemon
AnyNet (from Communications Server)	Base Element - implement Enterprise Extender as a replacement
English and Japanese panels from DFSORT	Priced Feature - no replacement offered
Support for VSAM data sets with IMBED, REPLICATE, or KEYRANGE attributes (from DFSMS)	Base Element - plan to redefine any affected VSAM data sets. Use tool to assist in identifying affected VSAM data sets.

z/OS Ordering and Deliverables

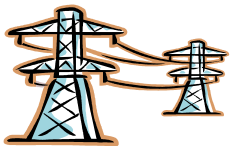


z890 and z990 Support for z/OS R4, R5, and R6

Release	Support Provided
z/OS R6	z990 Exploitation Support is incorporated z990 Cryptographic Support (FMID HCR770A) is incorporated. However, z990 and z890 Enhancements to Cryptographic Support (FMID HCR770B) is available for z/OS R6 as a web deliverable.
z/OS R5	z990 Exploitation Support is incorporated. z990 Cryptographic CP Assist Support (FMID HCR7708) is incorporated. z990 Cryptographic Support (FMID HCR770A) was a web deliverable for z/OS R5. However, z990 and z890 Enhancements to Cryptographic Support (FMID HCR770B) is available for z/OS R5 as a web deliverable, and replaces z990 Cryptographic Support.
z/OS R4	z990 Exploitation Support is incorporated into z/OS R4 after Feb 24, 2004. z990 Exploitation Support remains available separately in CBPDO until December 2006. z990 Cryptographic CP Assist Support (FMID HCR7708) is incorporated via z990 Exploitation Support. z990 Cryptographic Support (FMID HCR770A) was a web deliverable for z/OS R4. However, z990 and z890 Enhancements to Cryptographic Support (FMID HCR770B) is available for z/OS R4 as a web deliverable, and replaces z990 Cryptographic Support.

z/OS V1R6 Ordering

- **Program Number: 5694-A01**
  - Ensure you order the optional priced and unpriced features that you were using before!
  - Especially remember your export controlled features, if you desire. Here's the complete list:
    - *z/OS Security Level 3*
    - *Communications Server Security Level 3*
- **z990 and z890 Enhancements to Cryptographic Support NOT in R6**
  - Use your R10-R5 z890 and z990 Enhancements to Cryptographic Support web deliverable, or get it from the Download web site for z/OS R6
- **Tivoli Netview and System Automation users take note!**
  - z/OS msys for Operations contain parts of these products, ...see next foil
- *(Bimodal Migration Accommodation:*
  - *Applicable to z/OS R2, R3, and R4, NOT applicable to z/OS R5 or R6*
  - *Only orderable via the Download web site...more later!)*
- **Order z/OS V1R6 electronically via ShopzSeries!**



Products Related to z/OS R6

- ***IBM SMP/E for z/OS and OS/390, V3.3*** **(5655-G44)**
  - **SMP/E is non-exclusive! incorporated into R6**
    - Planned availability is September 24, 2004, at no charge to z/OS licensed users
    - Also available for download.
- ***IBM Debug Tool for z/OS V4 R1*** **(5655-L24)**
  - Debug Tool no longer incorporated, as of z/OS R5
- ★ **z/OS R6 msys for Operations contains parts of:**
  - **Tivoli Netview for OS/390 V1 R4 (5697-B82)**
  - **System Automation for OS/390 V2 R3 (5645-006)**
- ***Tivoli NetView for OS/390 V5 R1*** **(5697-ENV)**
  - Can be ordered with, and is compatible with z/OS R6 msys for Ops
- ***System Automation for z/OS V2 R3*** **(5645-006)**
  - Can be ordered with, and is compatible with z/OS R6 msys for Ops
- ***XML Toolkit for z/OS V1 R7*** **(5655-J51)**
  - Contains XML V1R6 and V1R5 levels, as well
  - May download *XML C++ Parser for the OS/390 V2.10 C++ Compiler* for z/OS deliverable
- ***IBM 64-bit SDK for z/OS, Java 2 Technology Edition V1 R4*** **(5655-M30)**
  - Can be ordered with, and can coexist with IBM SDK for z/OS, Java 2 Technology Edition V1 R4 (5655-I56)
- ***IBM Ported Tools for z/OS*** **(5655-M23)** - provides OpenSSH function!

z/OS Policies

- **Release Frequency**
  - z/OS V1 R6 is generally available and is the only orderable z/OS release
    - First annual release
    - All subsequent releases are planned for GA in September
- **Installation**
  - All elements must be installed except for JES2, JES3, or SDSF (depending on which JES you use) and any unpriced features you order
- **Coexistence-Migration-Fallback**
  - consistent policy
- **Service Support**

z/OS R6 Coexistence

- **Starting with z/OS R6, IBM has aligned the coexistence, fallback, and migration policy with the service policy.**
  - **z/OS R3, z/OS R4, z/OS R5, and z/OS R6** are supported for coexistence, migration, and fallback
  - Prepare now! **z/OS R4, z/OS R5, z/OS R6, and z/OS R7** are planned to be supported for coexistence, migration, and fallback
  - **OS/390 R10 canNOT coexist with z/OS V1 R5 or z/OS V1R6**
- **Only JES2/JES3 that can coexist with the shipped JES can be "staged" on z/OS. This is enforced in z/OS V1 R6. That means:**
  - z/OS R2/R3 JES2 thru z/OS R5/R6 JES2 are supported for coexistence, migration, and fallback
  - z/OS R2/R3 JES3 thru z/OS R5/R6 JES3 are supported for coexistence, migration, and fallback

z/OS Service Policy

- Release serviceable for three years following GA
- Service on last release of a version might be extended
- At least 12 months notice before withdrawing service
- Service policy supercedes the Coexistence Policy

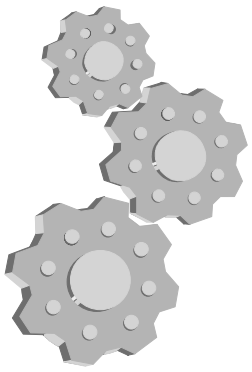
	General Availability	Service Expiration
OS/390 V2 R8	24 September 1999	30 September 2002
OS/390 V2 R9	31 March 2000	31 March 2003
OS/390 V2 R10	**29 September 2000**	**30 September 2004**
z/OS V1 R1	30 March 2001	31 March 2004
z/OS V1 R2	26 October 2001	**31 October 2004**
z/OS V1 R3	29 March 2002	**31 March 2005**
z/OS V1R4	27 September 2002	Announced to be 31 March 2007
z/OS V1R5	26 March 2004	Planned to be 31 March 2007
z/OS V1R6	24 September 2004	Planned to be September 2007

Positioning for z/OS R6

- Read Documentation and PSP buckets
  - *z/OS Migration* and *z/OS and z/OS.e Planning for Installation*
  - Software PSP buckets: ZOSV1Rx: ZOSGEN, SERVERPAC, ...
  - Hardware PSP buckets: 2084DEVICE, 2086DEVICE, 2064DEVICE, 2066DEVICE
- DASD Storage Requirements
  - Use SMP/E V3R2 or higher to reduce SMPLTS size on z/OS R4!

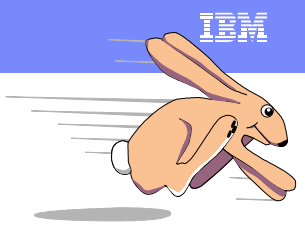
	z/OS R4	z/OS R5	z/OS R6
Target	4,646	5,160	5,277
DLIB	6,295	7,212	7,338
HFS	2,200	2,200	2,800 (some growth!)

sizes in 3390 cylinders



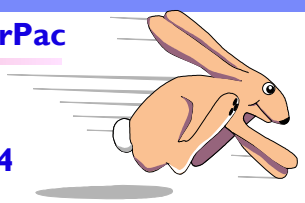
- Ensuring System Requirements Are Satisfied
  - Driving System Requirements
  - Target System Requirements
    - Hardware
    - Software
  - Coexistence System Requirements
- Migration Actions You Can Do NOW

Driving System Requirements - ServerPac



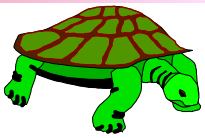
- **Minimum to Install z/OS R6 ServerPac via tape:**
  1. Any one of the following:
     - z/OS R3 with PTFs (many for LE since ServerPac uses LE runtime!)
     - Customized Offerings Driver (subset of z/OS R4, with SMP/E V3.3)
  2. Activated OMVS address space with UNIX kernel services operating in full function mode for unloading the HFS via the *pax* utility
  3. Install from a user id that is permitted to the system resources defined in ServerPac job RACFDRV. You can install from a superuser (UID=0), ***or*** be a member of the facility class resource BPX.SUPERUSER
  4. **Do not specify these LE run-time options as nonoverridable (NONOVR) in the CEEDOPT CSECT: ALL31, ANYHEAP, BELOWHEAP, DEPTHCONDLIMIT, ERRCOUNT, HEAP, HEAPCHK, INTERRUPT, LIBSTACK, PLITASKCOUNT, STACK, ...**
- **Minimum to Service the New Target System:**
  - See CBPDO Wave 2 **(includes shipped levels of program binder, SMP/E, and HLASM, and UNIX System Services requirements)**
  - If you order a product with your z/OS ServerPac that uses ++JAR, you'll need Java 2 Technology Edition (5655-D35). *z/OS itself does **NOT** need Java as a driving system requirement!*

Driving System Requirements - electronic ServerPac



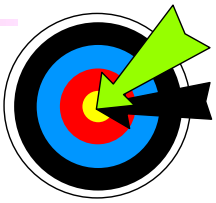
- **Limited availability for electronic delivery in 4Q04**
- **Planned general availability for electronic delivery is Jan 10, 2005**
  - **Can choose between tape and electronic delivery**
- **Minimum to Install z/OS R6 ServerPac via electronic delivery:**
  1. Must meet the tape requirements (on the previous foil)
  2. SMP/E V3.3
  3. Cryptographic Services ICSF set up for RECEIVE FROMNETWORK processing

Driving System Requirements - CBPDO (and to service your ServerPac target system)



- **Minimum for Wave 0 (Driving System Elements):**
  - z/OS R3 with PTFs
- **Minimum for Wave 1 and Wave 2 (JES):**
  - z/OS R3 with PTFs, along with **latest Program Binder, SMP/E, and HLASM**, and PTFs
    - May STEPLIB to Wave 0 target system's MIGLIB and SASMMOD1.
  - Activated OMVS address space, in full function mode
  - SMP/E Link Edit UTILITY entry for the program binder
  - Language Environment Run Time Library SCEERUN access.
  - Install from a user id that is a superuser (UID=0), or be a member of the facility class resource BPX.SUPERUSER
  - Install from a user id that is permitted read access to facility class resources BPX.FILEATTR.APF, BPX.FILEATTR.PROGCTL, and BPX.FILEATTR.SHARELIB (or BPX.FILEATTR.*)
  - **Group IDs uucpg and TTY, and user ID uucp, must be defined in your security database**
  - (Wave 1 and Wave 2 may be combined.)
- **May also use the Customized Offerings Driver to satisfy any wave**

Target System Requirements for z/OS R6



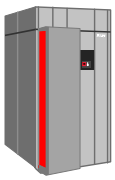
- **Software Requirements**
  - Coexistence Software (on Other Target Systems)
  - Correct Levels of IBM Non-z/OS and Non-IBM Products
  - Functional Requirements
    - z/OS R6 must run in z/Architecture mode
    - Some z/OS R6 functions (like zAAP) require z990 or z890
  - VM Guest considerations
    - **Only on z800 or z890: cannot IPL OS/390 or z/OS under an LPAR named ZOSExxxx (includes as a VM guest).**
- **Hardware Requirements**

  - Processor Requirements:
    - **an IBM @server zSeries: z990, z890, z900, or z800**
  - Coupling Facility: see http://www.ibm.com/eserver/zseries/pso/cftable.html

PSP Buckets

- **Upgrade ZOSV1R6**
  - Subset ZOSGEN
  - Subset SERVERPAC
  - Subset fmid or fmid/yymm, or name
- **Upgrade for non-exclusive elements**
  - Same as standalone program product
- **Upgrade CUSTOMPAC for fee deliverables**
- **Upgrade xxxxDEVICE for hardware**
  - for z990, is 2084DEVICE subset 2084/ZOS
  - for z900, is 2064DEVICE subset 2064/ZOS
  - for z890, is 2086DEVICE subset 2086/ZOS
  - for z800, is 2066DEVICE subset 2066/ZOS
- **PSP Buckets available on Internet**
  - http://techsupport.services.ibm.com/s390/support

A Brief History of Supported Architecture Modes



G5/G6 MP3000

z800, z900, z890, z990

OS/390 R10	ESA/390	ESA/390 or z/Architecture
z/OS R1	ESA/390	z/Architecture
z/OS R2 - R4	ESA/390	z/Architecture
z/OS R2 - R4 *	ESA/390	ESA/390 or z/Architecture
z/OS R5	ESA/390	z/Architecture
z/OS R6	not supported	z/Architecture

* using z/OS Bimodal Migration Accommodation within terms of offering

This means Bimodal Migration Accommodation not available on z/OS R6 (or R5)!

ESA/390 is 31-bit, z/Architecture is 64-bit

Coexistence System Requirements for z/OS R6 *from z/OS R4*

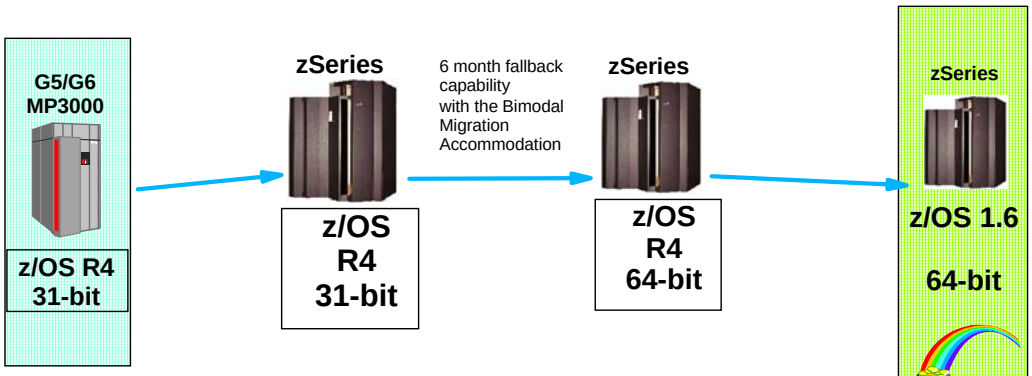
- **Documented in *z/OS Migration***
- ***From z/OS R4*** **Coexistence PTFs for z/OS R6:**
  - **BCP** - GRS, RRS, Console, Program Binder, XCF, z990
  - **Communications Server** - z990
  - **DFSMS** - dfp, hsm, and rmm, and ICKDSF support
  - **JES2** - for MAS support down to z/OS R2/R3 JES2
  - **JES3** - for multisystem complex support down to z/OS R2/R3 JES3
  - **Language Environment** - downward compatibility
  - **RMF** - z990
  - **SDSF** - Console
  - **SMP/E** - toleration of z/OS R6 (SMP/E V3R3) enhancements
- ***From z/OS R3 or R5*** **Coexistence PTFs for z/OS R6:**
  - **Found in the *z/OS Migration* manual**

Migrating to z/Architecture

z/OS R6 in z/Architecture!

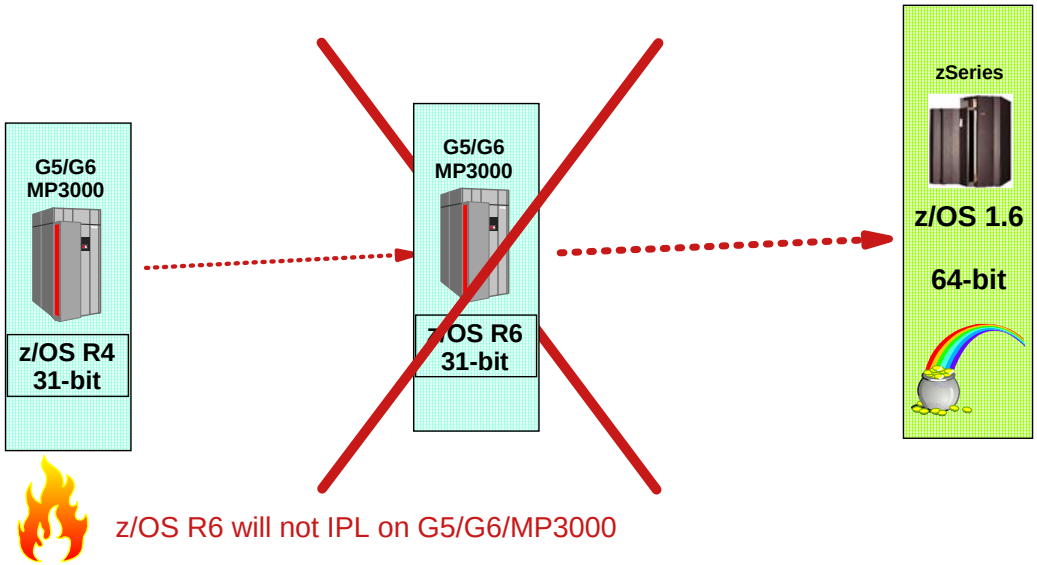
- **This will allow you to exploit:**
  - 64-bit architecture (z/Architecture), Intelligent Resource Director, HiperSockets, ...
- ★ Bimodal Migration accommodation allows you to use a "safety net" to z/Architecture, when coming from z/OS R4
- **Recommended scenarios follow, based on:**
  - need to exploit new architecture
  - level of existing hardware and level of existing software
  - migration flexibility
    - ★ *minimizing change (hardware, software, and architecture) is recommended*
- **Typical Migration Paths to z/OS R6 from z/OS R4:**
  - Hardware First (**recommended!**)
  - Software First from G5/G6/MP3000 (**disallowed!**)

Typical Migration Paths to z/OS R6: Hardware First



Recommended: single changes in hardware, architecture, and software

Disallowed Migration Path to z/OS R6: Software First from G5/G6/MP3000



z/OS R6 will not IPL on G5/G6/MP3000

z/OS and OS/390 Service Support

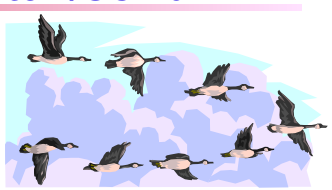
OS/390 V1R1 - V1R3, V2R4 - V2R9	Service discontinued
OS/390 V2R10	September 30, 2004
z/OS V1R1	March 31, 2004
z/OS V1R2	October 31, 2004
z/OS V1R3	March 31, 2005
z/OS V1R4	March 31, 2007
z/OS V1R5	March 31, 2007
z/OS V1R6	September 2007

- Service support extended for z/OS 1.4 by 18 months
- EOS dates for z/OS at: http://www-1.ibm.com/servers/eserver/zseries/zos/support/zos_eos_dates.html

Elements with Migration Actions from z/OS R4 to z/OS R6

- **Migration Actions You Can Do NOW:**
  - **Apply coexistence and fallback fixes (Required)**
  - **Use SOFTCAP to identify the effect of capacity changes (Recommended)**
  - **Find alternatives to removed elements and features (Required-IF)**
  - **Upgrade Windows 95, 98, and NT clients (Required)**
  - **Remove customization for ILM (Required)**
    - **Update the CustomPac Installation Dialog (Required-IF ServerPac)**
    - One time only! Follow instructions, and run the UPDATE job. Failure to do this will cause RECEIVE errors!
  - **Update local invocations of the CustomPac Installation Dialog (Required-IF ServerPac)**
    - Edit CPPCISF from local CLISTs to remove the ISPF4X(N) parameter

Elements with Migration Actions from z/OS R4 to z/OS R6



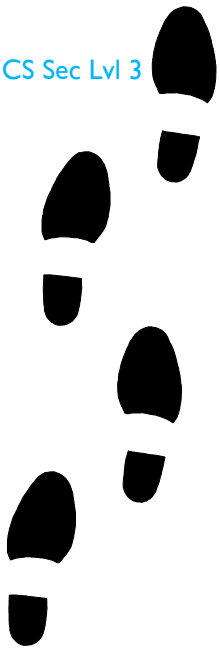
- **Documented in *z/OS Migration***
  - ***For complete migration tasks for z/OS R6, see this book!***
    - *from R4 to R6, and R5 to R6 (R3 to R6 is the entire book)*
    - *"When behaviors aren't the same anymore, migration actions are called for."*
- ***From z/OS R4* to z/OS R6:**

➡ BCP
➡ C/C++ without Debug
➡ Communications Server
◆ Cryptographic Services
➡ DFSMS
◆ DFSORT
◆ HCD
➡ HLASM
◆ ICKDSF
◆ Infoprint Server
◆ Integrated Security Services (LDAP Server)
◆ ISPF
➡ JES2
➡ JES3
➡ Language Environment
◆ Library Server
◆ OSA/SF
◆ RMF
◆ SDSF
◆ Security Server (RACF)
➡ SMP/E
◆ TSO/E
➡ z/OS UNIX System Services

➡ *means the migration actions follow within this presentation*

- **Migration Actions that follow are divided by :**
  - **ELEMENT, and then**
    - **WHEN you can do the action: Now, Pre-First IPL, or Post-First IPL**

Migrating to z/OS Summary: Preparation Can Be Priceless



- **Content of z/OS R6**
  - Remember the only export contolled features are now z/OS Sec Lvl 3 and CS Sec Lvl 3
- **z/OS Ordering and Deliverables**
  - Remember msys for Operations consideration, and other related products
- **z/OS Policies**
  - z/OS R4 Coexistence-Migration-Fallback from OS/390 R10
  - z/OS R5 Coexistence-Migration-Fallback from z/OS R2
  - z/OS R6 Coexistence-Migration-Fallback from z/OS R3
  - If you're on z/OS R4, the max migration stretch is to z/OS R7, prepare!
- **Ensuring System Requirements are Satisfied**
  - Driving System Requirements - z/OS R3 + PTFs, ...
  - Target System Requirements - **Arch Level Set in R6!**
- **Migrating to z/Architecture**
  - Migrating to z/OS R6 from R4: **Hardware First Path** is the way to go!
- **Coexistence Requirements**

Related Publications

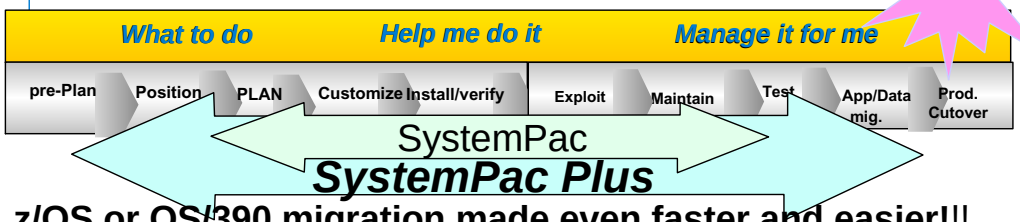
- **z/OS and z/OS.e Planning for Installation (GA22-7504)**
- **z/OS Introduction and Release Guide (GA22-7502)**
- **z/OS Planning for Workload License Changes (GA22-7506)**
- **z/OS Summary of Message Changes (SA22-7505)**
- **z/OS Program Directory**
- **z/OS Parallel Sysplex Test Report (n/a)**
- **z/OS License Program Specifications (GA22-7503)**
- **z/OS MVS Migration (GA22-7580)**
- **z/OS MVS Planning: Operation (SA22-7601)**
- **z/OS MVS Initialization and Tuning Reference (SA22-7592)**
- **z/OS MVS Data Areas, Vol 1 (ABEP-DALT) (GA22-7581)**
- **z/OS MVS Data Areas, Vol 2 (DCCB-ITZYRETC) (GA22-7582)**
- **z/OS MVS Programming: Workload Management Services (SA22-7619)**
- **File Server Consolidation on S/390 (SG24-5330)**
- **z/OS UNIX System Services Planning (GA22-7800)**
- **ServerPac: Installing Your Order (no order number; custom-built to your order)**
- **ServerPac: Using the Installation Dialog, (SA22-7815)**

SystemPac (fee offering)

- **Your z/OS, z/OS.e, or OS/390 system with IBM and independent software vendor products - on one deliverable, tailored for you!**
  - Load and Go with Full Volume Restore on your preferred DASD types
  - New technology enabled to build an e-business Application Server environment
  - WebSphere Application Server 4.0.1, 5.0 setup and customized- ready at IPL with all its prerequisites enabled:
    - Work Load Manager (WLM) Goal Mode with sample policy
    - z/OS UNIX System Services in full function mode
    - OS/390 or z/OS System Logger, Resource Recovery Server (RRS)
    - z/OS Security Server - RACF, Java for z/OS and OS/390 1.3.0
    - z/OS Communications Server, IBM HTTP Server DB2 V7.1.0
  - CICS TS, DB2, IMS, NCP enabled and started at IPL (opt)
  - Enhanced, customized system maintenance with periodic refreshes
  - ... and more.
  - z/OS V1.4 on SystemPac is now extended until March 22, 2005
- **Visit https://www.ibm.com/ca/custompac**

SYSTEMPAC Plus - A Total Migration Solution

NEW!



z/OS or OS/390 migration made even faster and easier!!!

- IBM Specialists perform the migration for you and will:
  - Conduct and document your planning meeting
  - Order and SMP/E RECEIVE your toleration maintenance
  - Order your Full Volume Dump SystemPac, including subsystems and ISV products
  - Install and verify your SystemPac
  - Complete setup of z/OS Communications Server, z/OS UNIX System Services, and z/OS Security Server
  - Customize HTTP Server/WebSphere Application Server
  - Implement z/OS UNIX sysplex support for shared HFS
  - Activate z/OS and OS/390 Distributed File Service Server Message Block
  - Install and activate IBM Electronic Service Agent for zSeries
  - Document and turn over your new z/OS system
  - To order, contact your IBM Specialist or IBM Sales Specialist

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