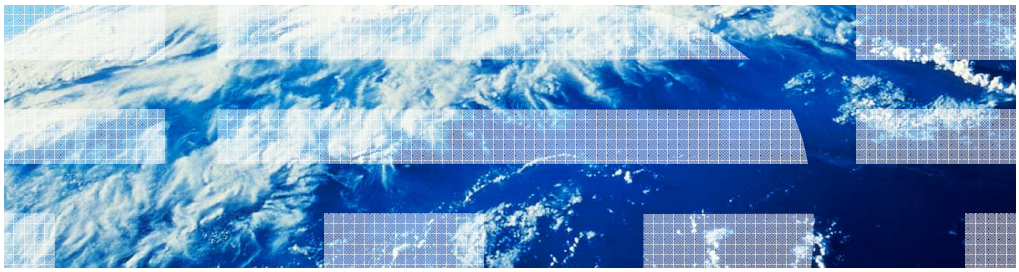
Migrating to z/OS R13 - Part 1 of 3



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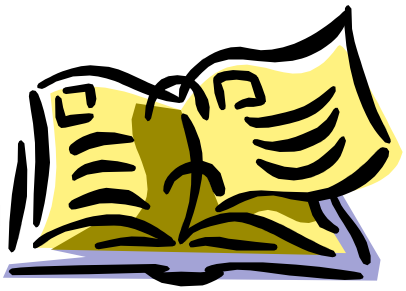
If you have never installed a ServerPac before, or it has been a long time since you have, this is the session for you. The speaker will cover the basic concepts of a ServerPac install, and go through at a high level what the tasks are. Some of the more recent important enhancements will be covered, to help you get the most out of your ServerPac install.

Grateful acknowledgement to Lucy Miller, Senior IT Architect for Customized Offerings, for providing the basis for this presentation.

Migrating to z/OS R13 - Part 1 of 3 Agenda

- **Content of z/OS R13**
  - Changing and Withdrawn Elements and Features
- **z/OS Ordering and Deliverables**
  - Products Related to z/OS
- **z/OS Policies**
  - z/OS End of Service dates
  - z/OS Coexistence-Migration-Fallback
- **Planning for z/OS R13:**
  - Ensuring System Requirements are Satisfied
    - Driving and Target System Requirements
  - Coexistence System Requirements
    - Programmatic Verification is Available!
  - Migration Actions You Can Do NOW
  - Programmatic Verification of Migration Actions for z/OS R13
  - Installation Enhancements for z/OS R13



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Structure of *Migrating to z/OS R13* Presentations

- **Session Part 1 of 3**
  - Content is what you just saw on the previous slide
- **Session Part 2 of 3**
  - Migrations actions for z/OS R13 and R12 from selected elements:
    - General migration actions
    - BCP
    - Communications Server
    - DFSMS
    - Infoprint Server
    - System SSL and TSO/E
- **Session Part 3 of 3**
  - Migrations actions for z/OS R13 and R12 from selected elements:
    - Distributed File Service
    - JES2 and JES3
    - Language Environment
    - z/OS UNIX
  - SMP/E and ServerPac Installation Enhancements
  - Some Helpful z/OS R13 Sysprog Enhancements!

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Scope

- **Focus on Migrating <u>to z/OS R13 from z/OS R12 and R11</u>**

If migrating to a new server level, see:

- for z890 and z990: migration action in *z/OS Migration "Migrate to a z990 or z890 server"*
- for z9 EC and BC: migration action in *z/OS Migration "Migrate to a System z9 server"*
- for z10 EC and BC: migration action in *z/OS Migration "Migrate to a System z10 server"*
- for z196 and z114: migration action in *z/OS Migration "Migrate to an IBM zEnterprise server"* **or attend session "z/OS Software Positioning for the zEnterprise (z196 or z114) Server"**

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z/OS R13 Changing Elements (from z/OS R11 and R12)

- BCP
- C/C++ Without Debug Tool
- Common Information Model (CIM)
- Communications Server
- *Communications Server Security Level 3*
- Cryptographic Services:
  - ICSF (FMID HCR7780)
  - PKI Services
  - System SSL
- DFSMSdfp
- DFSMSdss
- DFSMShsm
- DFSMSrmm
- DFSMStvs
- DFSORT
- Distributed File Service
- HCD
- HCM
- IBM Tivoli Directory Server
- Infoprint Server
- Integrated Security Services:
  - Network Authentication Service
- ISPF
- JES2
- JES3
- Language Environment
- Library Server
- Metal C Runtime Library
- Network File System
- RMF
- Run-Time Library Extensions
- SDSF
- Security Server - RACF
- SMP/E (V3R6)
- TSO/E
- *z/OS Security Level 3:*
  - *IBM Tivoli Directory Server Security Level 3*
  - *Network Authentication Service Level 3*
  - *SSL Level 3*
- z/OS UNIX

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

→ This element changed in z/OS R13 (from z/OS R11)

→ This element changed in z/OS R13 (from z/OS R12)

All other elements not listed have not changed since z/OS R11.

There are no new elements, since z/OS R9.

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Element and Functions Withdrawn from z/OS R12

Optional setting for RFC4301 compliance (from Communications Server)	Base Element – All IP security filters must be compliant with RFC4301. You can no longer use the RFC4301Compliance parameter on the IpFilterPolicy statement to specify whether Policy Agent enforces compliance. It is ignored, and the Policy Agent will enforce the rule that all IP filters are compliant.	**As of R12**
CSVRTLS services in the BCP for Language Environment RunTime Library Services	Base Element support – LE RTLS support was removed in z/OS R5. BCP RTLS services (SET RTLS, DISPLAY RTLS, RTLS in IEASYSxx and CSVRTLSxx, and CSVRTLS macro) are removed in z/OS R12. Usage tracking assistance is provided in OA29995 (R11) and OA29019 (R10).	**As of R12**
msys for Setup	Base Element – CBPDO users should run job CLNOS390. ServerPac users do not need to do anything.	**As of R12**

ig i g / - p i

Element and Functions Withdrawn from z/OS R13

z/OS UNIX Connection Manager and Process Manager	Base Element	**In z/OS R13**
DCE and DCE Security Server	Base Elements – IBM WebSphere Application Server, the IBM Network Authentication Service, and/or the IBM Directory Server as replacement strategies for each of the DCE technologies.	**In z/OS R13**
DFS support that uses the DCE architecture	Base Element support – z/OS Network File System (NFS) implementation as the replacement	**In z/OS R13**

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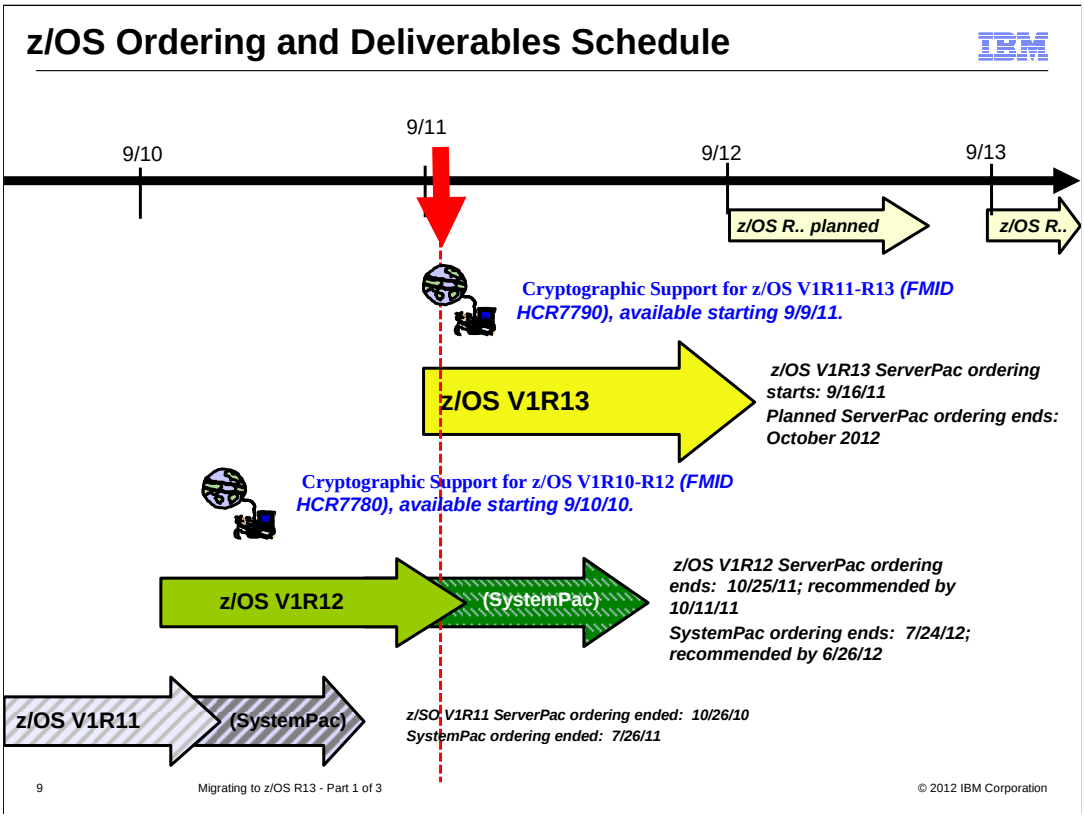
Functions Planned to be Withdrawn

in the release after z/OS R13…

zFS multi-file system aggregates (from Distributed File Service)	Base Element – copy zFS multi-file system aggregates to zFS compatibility mode aggregates.	**In the release after z/OS R13**
zFS cloning support (such as `zfsadm clone` and `zfsadm clonesys` commands). Do not mount file systems containing a cloned file system (.bak).	Base elements – when support for cloning is removed, only zFS capability mode aggregates will be supported. Find (with `modify zfs,query` command) and copy any cloned files to compatibility mode aggregrates.	**In the release after z/OS R13**
BIND 9.2.0 function (from the Communications Server)	Base Element support – for use as a caching-only name server, use Resolver cache function (in z/OS R11). For use as a primary or secondary authoritative name server, consider using BIND on Linux for System z.	**In the release after R13**
BPX.DEFAULT.USER	Base Element support – use BPX.UNIQUE.USER instead (as of R11) or assign unique UIDs and GIDs.	**In the release after R13**
Capacity Provisioning using System z API with SE and HMC	Base Element support – will use BCPii instead. System z API will still be supported on the SE and HMC. Use Tracking Facility with OA35284. Look for "CPO-W:SNMP *usage domain name*".	**In the release after R13**
Language Environment runtime options via USERMOD	Base Element support – use CEEPRMxx instead (with z/OS R12 NONOVR support, if necessary)	**In the release after R13**


z/OS Ordering and Deliverables Schedule
IBM
9/10
9/11
9/12
9/13
z/OS R.. planned
z/OS R..
Cryptographic Support for z/OS V1R11-R13 (FMID HCR7790), available starting 9/9/11.
z/OS V1R13
z/OS V1R13 ServerPac ordering starts: 9/16/11
Planned ServerPac ordering ends: October 2012
Cryptographic Support for z/OS V1R10-R12 (FMID HCR7780), available starting 9/10/10.
z/OS V1R12
(SystemPac)
z/OS V1R12 ServerPac ordering ends: 10/25/11; recommended by 10/11/11
SystemPac ordering ends: 7/24/12; recommended by 6/26/12
z/OS V1R11
(SystemPac)
z/OS V1R11 ServerPac ordering ended: 10/26/10
SystemPac ordering ended: 7/26/11
9
Migrating to z/OS R13 - Part 1 of 3
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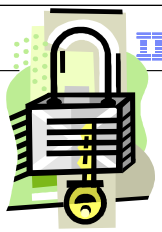
Crypto Support in z/OS Releases



Release	*Level Integrated and Available*
z/OS R13	ICSF FMID HCR7780 is incorporated. ▪**Cryptographic Support for z/OS V1R11-R13 Web deliverable (FMID HCR7790) planned to be available on 9/9/11.**
z/OS R12	ICSF FMID HCR7770 is incorporated. ▪**Cryptographic Support for z/OS V1R10-R12 Web deliverable (FMID HCR7780) available on 9/10/10.** ▪**Cryptographic Support for z/OS V1R11-R13 Web deliverable (FMID HCR7790) planned to be available on 9/9/11.**
z/OS R11	ICSF FMID HCR7751 is incorporated. ▪**Cryptographic Support for z/OS V1R9-R11 Web deliverable (FMID HCR7770) available on 11/20/09.** ▪**Cryptographic Support for z/OS V1R10-R12 Web deliverable (FMID HCR7780) available on 9/10/10.** ▪**Cryptographic Support for z/OS V1R11-R13 Web deliverable (FMID HCR7790) planned to be available on 9/9/11.**

Your current ICSF level indicates which migration actions you'll need to perform when going to z/OS R13.

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Some popular (no-charge!) products for z/OS

- ***IBM z/OS Management Facility, V1 R13*** **(5655-S28, 5655-S29)**

- ***IBM Ported Tools for z/OS V1 R2 (5655-M23, 5655-M29)*** , available 7/9/10.
  - V1R2 is updated with newer versions of the associated open source code; specifically OpenSSH 5.0p1, OpenSSL 0.9.8k, and zlib 1.2.3. ***and features (all the same prior level): IBM Ported Tools for z/OS: Perl Feature, IBM Ported Tools for z/OS: PHP Feature, IBM Ported Tools for z/OS: Suppl Toolkit Feature*** (bzip2, cURL 7.16.1), ***IBM Ported Tools for z/OS: IBM HTTP Server V7.0 Feature (5655-M23)***

- ***XML Toolkit for z/OS V1 R9*** **(5655-J51, 5655-I30)**
  - Contains XML V1R8 and V1R7 levels, as well
- ***XML Toolkit for z/OS V1 R10*** **(5655-J51, 5655-I30)** – **only** contains XML V1R10 level

- ***IBM 64-bit SDK for z/OS, Java 2 Technology Edition, V5 (5655-N99, 5655-I48)***
- ***IBM 31-bit SDK for z/OS, Java 2 Technology Edition, V5 (5655-N98, 5655-I48)***
- ***IBM 64-bit SDK for z/OS, Java 2 Technology Edition, V6 (5655-R32, 5655-I48)***
- ***IBM 31-bit SDK for z/OS, Java 2 Technology Edition, V6 (5655-R31, 5655-I48)***
- ***IBM 64-bit SDK for z/OS, Java 2 Technology Edition, V6.0.1 (5655-R32, 5655-I48)***
- ***IBM 31-bit SDK for z/OS, Java 2 Technology Edition, V6.0.1 (5655-R31, 5655-I48)***
  - V6.0.1, available since 3/18/11.
- ***IBM 64-bit SDK for z/OS, Java 2 Technology Edition, V7 (5655-W44 , 5655-I48)***
- ***IBM 31-bit SDK for z/OS, Java 2 Technology Edition, V7 (5655-W43, 5655-I48)***
  - V7 to be available 10/28/11.

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z/OS Policies

- **Annual Release Frequency**
  - z/OS V1 R13 GA is planned for *Sept 30, 2011*
  - All z/OS releases are planned to GA every September
- **Service Support Policy**
- **Coexistence-Migration-Fallback Policy**
- ***Policy Change!***
  - z/OS V1.13 is planned to be the last release to support a staged migration for JES2 and JES3. Future releases will require you to migrate to all elements of z/OS at the same time, including JES2, JES3, or both.

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z/OS Service Policy

- **Release serviceable for three years following GA.**
- **Then, for up to two additional years, you can purchase:**
  - IBM Lifecycle Extension for z/OS V1.9 (5646-A01)
  - IBM Lifecycle Extension for z/OS V1.10 (5656-A01)
- **At least 12 months notice before withdrawing service**
- **Handy website:**
  http://www.ibm.com/servers/eserver/zseries/zos/support/zos_eos_dates.html

	GA Date	End of Service Date
z/OS V1R9	28 Sept 2007	Occurred on 30 Sept 2010 (and SMP/E V3.4!) Lifecycle Extension, until 30 Sept 2012
z/OS V1R10	26 Sept 2008	Occurred on 30 Sept 2011 Lifecycle Extension, until 30 Sept 2013.
z/OS V1R11	25 Sept 2009	Announced to be 30 Sept 2012
z/OS V1R12	24 Sept 2010	Planned to be Sept 2013
z/OS V1R13	30 Sept 2011	Planned to be Sept 2014

LOOK!

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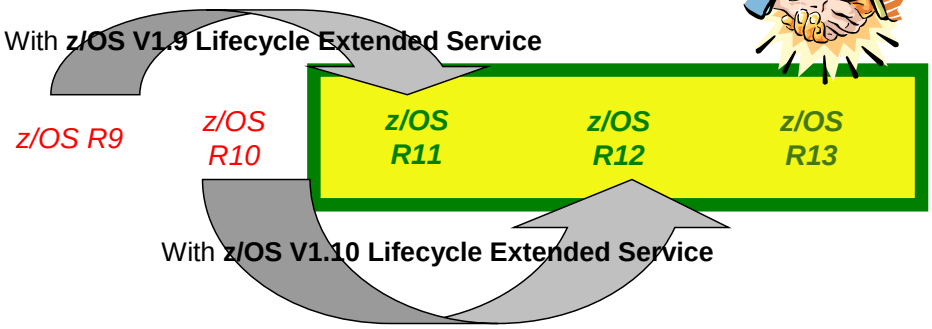
z/OS Coexistence Policy



- **Starting with z/OS R6, IBM has aligned the coexistence, fallback, and migration policy with the service policy.**
- **z/OS R11, z/OS R12, and z/OS R13 are supported for coexistence, migration, and fallback**
- **Keep in mind: exploitation of new function can require that all systems be at z/OS R13 before use. Fallback maintenance may not be available for all exploitation cases. Consult the appropriate exploitation documentation to understand the limitations on fallback.**

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Positioning for z/OS R13

- **Read Documentation and PSP buckets**
  - ***z/OS Migration*** and ***z/OS Planning for Installation***
  - Software PSP buckets: ZOSV1R13: ZOSGEN, SERVERPAC, ...
  - Must use FIXCATs for coexistence verification.

- **DASD Storage Requirements for z/OS R13:**

	z/OS R11	z/OS R12	z/OS R13
Target	6,063	5,891	5,868
DLIB	8,781	8,599	8,941
File System	3,100	3,100	3293 (HFS) 3309 (zFS)

sizes in 3390 cylinders

The 3390-6 limit is 6678 cylinders !!!

Approaching 3390-3 limit of 3339 cylinders !!!

- **Ensuring System Requirements Are Satisfied**
  - *Driving System Requirements* – no new news.
    - SMP/E IO11698 PTF (RSU1004) for access authority.
  - *Target System Requirements*
    - Hardware and Software
  - *Coexistence System Requirements*
- **Migration Actions You Can Do NOW**

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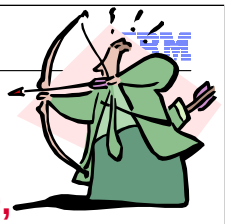
Target System HW Requirements for z/OS R13



- **Hardware Requirements**
  - Processor Requirements:
    - IBM System z server: **z114, z196, z10, z9, z990, z890, z900, or z800**
  - Coupling Facility**:** see http://www.ibm.com/eserver/zseries/pso/cftable.html
    - z114 and z196 initially ships with CFCC level 17
      - CFCC level 17 support requires coexistence on z/OS R11.
        - These PTFs are identified with FIXCATs `IBM.Device.Server.z196-2817, IBM.Device.Server.z114-2818, IBM.Function.SYSPLEXDataSharing, IBM.Coexistence.z/OS.V1R12,` and `IBM.Coexistence.z/OS.V1R13`
      - Larger CF structure sizes may be necessary for CFCC level 17. Use CFSIZER for planning structure sizes to get to the current CFCC level.

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Migration Action with z196 and z114 and z/OS R13

Accommodate HiperDispatch default of YES on IBM zEnterprise (Recommended)

- As of R13 *when running on z196 or z114*, IEAOPT*xx* keyword HIPERDISPATCH will default to YES, if not specified.
- If HIPERDISPATCH=NO is specified, the specification will be honored as it was on previous z/OS releases.
- **Action:** Examine your IEAOPTxx members that will be used for z/OS R13 that will be IPLed on a zEnterprise.
- If YES, then nothing to do. If omitted, then the default for you will switch from NO to YES. Understand YES considerations*. Recommended to use FIXCAT for your server (IBM.Device.Server.*xxxxxxx*) for installing HIPERDISPATCH fixes.
- If NO, then investigate:
  - Recommendation is to use YES, where the LPAR weight guarantees a share of two or more physical processors without a compelling reason for running HIPERDISPATCH=NO.
  - If you still want NO, change the SUP_HiperDispatch health check to succeed, add the machine type to the MachTypes parameter and verify that the HIPERDISPATCH parameter is NO.
    `PARM('HIPERDISPATCH(NO),MachTypes(2817,2818)')`

* YES considerations include: WLM policy considerations, and using the "Global Performance Data Control" in LPAR profiles.

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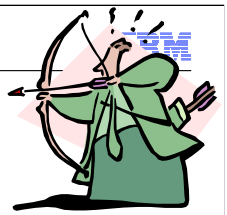
Software Requirements for z/OS R13



- **Software Requirements:**
  - **Coexistence Software** (on other z/OS systems)
  - **Target Software** (correct levels of IBM non-z/OS and non-IBM products on the z/OS system)
    - If the IBM products are still service-supported, they may be used on z/OS V1R13, **with some exceptions** found in *z/OS V1R13 Planning for Installation*, Appendix B**.**
  - **Functional Requirements**
    - Some functions may need specific SW or HW levels for exploitation.
    - *Reminder:* Consult the appropriate exploitation documentation to understand the limitations on fallback.

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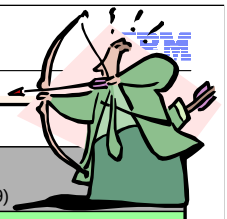
Some IBM SW Target System Req's for z/OS R13



Product name	Minimum supported level
CICS TS	**V3 R1 + PTFs UK29210, UK29407, and UK40130** (V2R2 was end of service: 4/30/08, V2R3 was end of service: 9/30/09)
DB2	**V8 R1** (V7.1 was end of service: 6/30/08)
IMS	**V10 R1 with PTFs UK47628, UK38953, UK41225, and UK41224** (end of service: 11/12/12) (V7 R1 was end of service: 11/8/05; V8 R1 was end of service: 11/05/08; V9 R1 was end of service 11/7/10)
WebSphere Application Server	**V6.1 – end of service 9/30/12.** (V6.0.1 was end of service: 9/30/10; V5.0 was end of service: 9/30/08)
Tivoli OMEGAMON XE	**V4.1 + PTFs described in XE Technotes** (**V3.1 is end of service: 4/30/11**; V2.2 was end of service: 9/30/08)
Tivoli System Automation	**V3.2 + PTFs UA43003, UA44993, UA47085, UA43533, and UA52313.** (V3.1 was end of service 9/30/10**;** V2.3 was end of service: 9/30/07)
IBM SDK Java Technology Edition (31-bit or 64-bit)	**V5 R0** (**V1R4 was end of service: 9/30/11**. z/OS R11 was the last release for which SDK V1R4 was supported)
Tivoli Netview	**V5 R2 with PTFs UA42145 and UA46832 – end of service 3/31/12.** (V5R1 is still in service until 3/31/12)

- **Use FIXCAT `IBM.TargetSystem-RequiredService.z/OS.V1R13`**
- **Website http://www-306.ibm.com/software/support/lifecycle/ can be helpful.**

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Target System PTF Verification for z/OS R13

1. **RECEIVE the latest HOLDDATA. (If you pull HOLDDATA from the ftp website, make sure you use FULL!)**
   - **HOLDDATA is produced to associate a particular PTF with a minimum or functional level for z/OS R13.**

```
++HOLD(HWRE320) FIXCAT FMID(HWRE320) REASON(AA31274)
RESOLVER(UA52313) CATEGORY(IBM.TargetSystem-
RequiredService.z/OS.V1R11, IBM.TargetSystem-
RequiredService.z/OS.V1R12, IBM.TargetSystem-
RequiredService.z/OS.V1R13) DATE(11154).
```

2. **Run the REPORT MISSINGFIX command to see what is needed, but not yet installed.**

```
SET BDY(GLOBAL).    /* Your Tivoli System Automation global */
REPORT MISSINGFIX ZONES(TIVTGT)
FIXCAT(IBM.TargetSystem-RequiredService.z/OS.V1R13).
```


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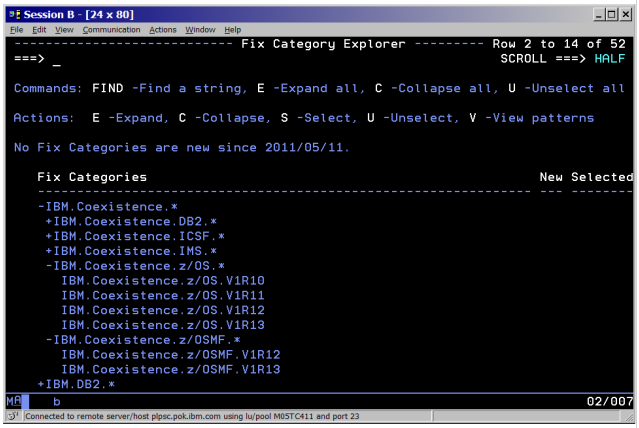
Coexistence System PTF Verification for z/OS R13

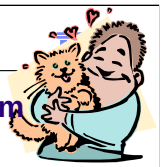
- ***Must* use FIXCATs to verify coexistence PTFs are installed.**
- **Other related coexistence FIXCATs you may want to use:**
  - **`IBM.Coexistence.z/OS.V1R13`**
  - **`IBM.Coexistence.ICSF.z/OS_V1R11-V1R13-HCR7790`**
  - **`IBM.Coexistence.z/OSMF.V1R13`**
  - …and there may be others!

Use the FIXCAT Explorer* !

*** SMP/E panels: 1.1, global, 2 Options, select your options, 7, 2, YES for explore.**



Coexistence System PTF Verification for z/OS R13



1. **RECEIVE the latest HOLDDATA. (If you pull HOLDDATA from the ftp website, make sure you use FULL!)**
   - **HOLDDATA is produced to associate a particular PTF as coexistence between z/OS R11 or z/OS R12, with z/OS R13.**

```
++HOLD(HQX7760) FIXCAT FMID(HQX7760) REASON(AM03128)
RESOLVER(UK90030) CATEGORY(IBM.Coexistence.z/OS.V1R13)
DATE(11082).
```

2. **Run the REPORT MISSINGFIX command to see what is needed, but not yet installed.**

```
SET BDY(GLOBAL).    /* Your z/OS R11 global */
REPORT MISSINGFIX ZONES(ZOSR11T)
FIXCAT(IBM.Coexistence.z/OS.V1R13).
```

An even better idea is to also include here the FIXCAT IBM.Function.HealthChecker!

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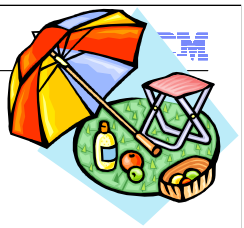
Some Migration Tasks You Can Do NOW



1. **Transition off of removed functions and elements:**
   - In R12: RFC4301 compliance, CSVRTLS removal, …
   - In R13: DCE removals, DCE Security Server, ...
   - Beyond R13: zFS multi-fs, BPX.DEFAULT.USER, BIND 9.2.0, ...
2. **Review documentation and PSP buckets.**
3. **Prepare Driving and Target Systems:**
   - Driving systems – nothing new here, if you've handled SMP/E APAR IO11698.
   - Target systems -
     - Preparation for CFCC level 17?
     - DASD storage for z/OS R13 – position root on larger DASD??
     - IBM product level research: FIXCAT **IBM.TargetSystem-RequiredService.z/OS.V1R13**
     - ISV research for z/OS R13
   - Coexisting systems - FIXCAT **IBM.Coexistence.z/OS.V1R13** (and others!)
4. **Use IBM Health Checker for z/OS!** FIXCAT **IBM.Function.HealthChecker**
   - Activate the Migration Health Checks (they are shipped INACTIVE).
5. **Perform z/OS R13 migration actions you can do NOW.**

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IBM Health Checker for z/OS *for Migration* Use

1. **Install all Migration Health Check PTFs on your current release. PTFs will be marked with FIXCAT IBM.Function.HealthChecker.**
2. **Activate the Migration Health Checks appropriate for your migration path, specifying releases you are migrating *through* and *to* . For example, one way is:**
   - **F HZSPROC,ACTIVATE,CHECK=(IBM*,*MIG*)**
     Could also be IBM*,ZOSMIG* or other ways…
3. **Migration Health Checks will run on your current release.**
4. **Review output for exceptions to create planning items for your migration plan.**

Note: some "Best Practice" health checks can also be useful for migration.

These checks are shipped ACTIVE.

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Migration Health Checks are intended to be used in a scenario, such as the following, on your current release:

1.Install all the latest Migration Health Checks. Migration Health Checks are recommended to run on your existing system before you migrate to a new release, therefore they are provided in the service stream in PTFs (or ++APARs during ESP). You must install the PTFs/APARs on your current system to have the Migration Health Checks available. Migration Health Checks added to the PTF service stream, like other Health Checks, can be found using the functional PSP bucket "HCHECKER". You can also use a website to see all Health Checks available at http://www.ibm.com/systems/z/os/zos/hchecker/check_table.html. You may want to install the PTFs during a regular service window, so that an IPL is scheduled afterwards. Health Checks are often added by a function when it is started or restarted, so you may find that putting the PTFs/APARs on before a scheduled IPL may work best for you. Additional Migration Health Checks could be added at different times, so having the latest ones installed is best.

2.Activate the Migration Health Checks appropriate for your migration path. Because the naming convention for Migration Health Checks indicate which release introduced the migration action, you can activate just the checks appropriate for your migration path. Using SDSF (or another method for viewing Health Checks, especially using filters) you can view ahead of time which Migration Health Checks you have available on your system. As a theoretical example, if you are migrating from z/OS V1R8 to z/OS V1R10, you would need to activate the Migration Health Checks that occurred in both z/OS V1R9 and z/OS V1R10. If you were migrating from z/OS V1R9 to z/OS V1R10, you would only need to activate the Migration Health Checks that occurred in z/OS V1R10. There are many ways of making a check active, and many ways of using wildcarding to include specific checks. Here are some examples of using the MODIFY command to make checks active:

F HZSPROC,ACTIVATE,CHECK=(IBM*,*MIGV1*)

F HZSPROC,ACTIVATE,CHECK=(IBM*,ICSFMIG*)

F HZSPROC,ACTIVATE,CHECK=(IBM*,ZOSMIGV1R10)

Remember that for z/OS, there are two naming conventions used, one for ICSF (that starts with **ICSFMIGnnnn**) and one for the rest of z/OS (that starts with **ZOSMIGVvvRrr**) . Use a wildcard filter that includes the intended Migration Health Checks.

3.Migration Health Checks will run and gather information.

4.Review the Health Check output, and re-run checks as appropriate. Any exceptions should be addressed in your migration plan. If you can complete the migration action before moving to the new z/OS release, you can re-run the check to verify that it was completed correctly on your current system.

Deactivate the Migration Heatlh Checks, if you desire. For example:

F HZSPROC,DEACTIVATE,CHECK=(IBM*,*MIGV1*)

F HZSPROC,DEACTIVATE,CHECK=(IBM*,ICSFMIG*)

F HZSPROC,DEACTIVATE,CHECK=(IBM*,ZOSMIGV1R10)

General System REXX Reminder!

- Some IBM Health Checker for z/OS checks are written in System REXX.
- Exploiters of System REXX (not just checks) require both of the following:
  - **Compiled REXX** needs either Alternate Library for REXX (available in z/OS since V1R9) *or* from the IBM Library for REXX on zSeries (5695-014). The runtime library will need to be available to the system:
    - REXX.SEAGALT can be put in the LNKLST.
    - REXX.SEAGLPA can be put in the LPALST.
    - If you do not APF-authorize the library, you will get an abend when the runtime routines are requested by an APF-Authorized routine.
  - **System REXX** customization must be performed. Customization tasks are documented in "System REXX" in *z/OS MVS Programming: Authorized Assembler Services Guide*.

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IBM Health Checker for z/OS Checks for Migration

1. ZOSMIGREC_ROOT_FS_SIZE
2. XCF_SYSPLEX_CDS_CAPACITY
3. RSM_MEMLIMIT
4. ZOSMIGREC_SUP_TIMER_INUSE
5. SUP_HiperDispatchCPUConfig
6. ZOSMIGV1R13_CNZ_CONS_OPER_MODE
7. SUP_HiperDispatch
8. CNZ_SYSCONS_ALLOWCMD
9. ZOSMIGV1R12_SUP_LCCA_ABOVE_16M
10. ZOSMIGV1R12_RCF_PCCA_ABOVE_16M
11. GRS_AUTHQLVL_SETTING
12. ZOSMIGV1R11_CS_RFC4301
13. ZOSMIGV1R11_CS_BIND9
14. CATALOG_IMBED_REPLICATE
15. ZOSMIGV1R11_ZFS_RM_MULTIFS / ZOSMIGREC_ZFS_RM_MULTIFS
16. ZOSMIGV1R13_ZFS_FILESYS
17. ZOSMIGREC_SMB_RPC
18. INFOPRINT_PRINTWAY_MODE
19. ZOSMIGV1R12_INFOPRINT_INVSIZE
20. INFOPRINT_V2DB_CHECK
21. JES2_Z11_Upgrade_CK_JES2
22. CEE_USING_LE_PARMLIB
23. SDSF_ISFPARMS_IN_USE
24. USS_HFS_DETECTED
25. ZOSMIGV1R13_RO_SYMLINKS

All these checks are cross-referenced for the associated migration action in *z/OS R13 Migration!*

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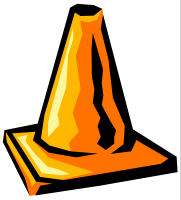
Something available for those that share IEASYSxx!

Consider exploiting WARNUND for new IEASYSxx statements

- **Description:** Starting in z/OS V1R13 (and rolled back to z/OS V1R11 and z/OS V1R12 in OA35929), you can specify the WARNUND statement in IEASYSxx.
- Usage of this statement indicates to produce a new warning message IEA660I when undefined statements are encountered, rather than prompting for a correct statement. No DISPLAY IPLINFO,WARNUND support.
- Usage of WARNUND can be particularly useful when specifying new parmlib options in IEASYSxx (such as the new CATALOG=, IXGCNF=, AUTOR=), and allowing these new IEASYSxx specifications to be shared with pre-z/OS V1R13 systems.
- **Steps to take:**
  - Install **OA35929** on all pre-z/OS V1R13 systems.
  - As you add new statements in IEASYSxx for functional exploitation and you wish to share those modified IEASYSxx members with pre-z/OS V1R13 systems, add "**WARNUND**" to those IEASYSxx members at the beginning of IEASYS00 as that will cover updates in all IEASYSxx members.

Beware of typos! Review your messages!
– Before WARNUND support:
IEA321I INVALID PARAMETER SYNTAX - CATALAG=(00 - UNDEFINED KEYWORD
IEA324I SYSP INPUT TERMINATED IN IEASYSMW
IEA336A RESPECIFY PARAMETERS OR PRESS ENTER TO CANCEL
– After WARNUND support:
IEA321I INVALID PARAMETER SYNTAX - CATALAG=(00 - UNDEFINED KEYWORD
IEA660I PROCESSING CONTINUES AFTER UNDEFINED KEYWORD DUE TO WARNUND



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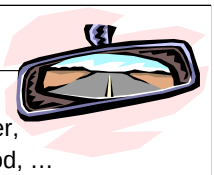
Migrating to z/OS R13 - Part 1 of 3 Summary



- **Content of z/OS R13**
  - •Prepare now for removed content: RFC4301, DCE and DCE Security Server,
  - •And future removals: zFS multi-fs aggrs, BPX.DEFAULT.USER, LE usermod, …
- **z/OS Ordering and Deliverables**
  - •Order z/OS R12 on ServerPac before Oct 11, 2011 if you need it!
  - •Latest ICSF level (HCR7790) is planned to be available on Sept 9, 2011. Not in R13.
  - •z/OSMF, Ported Tools (and all features), XML R9 and R10, 31-bit and 64-bit SDKs...
- **z/OS Policies**
  - •z/OS R13 Coexistence-Migration-Fallback from z/OS R12 or z/OS R11.
  - •The Lifecycle Extension can help you for corrective service, not extended coexistence.
- **Ensuring System Requirements are Satisfied**
  - •Driving, Target SW, Target HW, and Coexisting System Requirements – file sys is larger!
    - •HiperDispatch default change on zEnterprise with z/OS R13.
    - •Use FIXCATs IBM.TargetSystem-RequiredService.z/OS.V1R13, IBM.Coexistence.z/OS.V1R13, IBM.Function.HealthChecker, and others.
- **Use IBM Health Checker for Migration Actions:**
  - •Install and activate INACTIVE migration health checks.
  - •Review migration health check output for z/OS R13.
- **Evaluate using WARNUND:** helpful when sharing IEASYSxx for new statements!

- ...and everything applicable in the next presentations!

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