

MVS System Messages Volume 9 (IGF-IWM) is updated with WLM message IWM069I and Health Checker messages IWMH101I and IWMH102E.

IBM Health Checker for z/OS User's Guide is updated with check descriptions for Workload Manager checks (IBMWLM).

The WLM sample service definition (member IWMSSDEF in SYS1.SAMPLIB) is updated with the recommended WLM service coefficients (CPU=1, IOC=0, MSO=0, and SRB=1).

Documentation updates for OA59066:

z/OS 2.3 GA32-0676-30 - MVS System Messages Volume 9 (IGF-IWM)

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IWM069I WLM policy was refreshed due to the change of the service coefficients <text>

Explanation

In the message text: <text> indicates how the service coefficients were changed:

- to system preset values (CPU=1,SRB=1,IOC=0,MSO=0)
- back to the defined values

z/OS V2R4 is the last release to allow specifying service coefficients in the WLM service definition. With the release after z/OS V2R4 the coefficients are CPU=1, SRB=1, IOC=0, and MSO=0 and cannot be changed. When a system with a release after z/OS V2R4 joins the sysplex and the active WLM policy specifies different values, the WLM policy is refreshed and the service coefficients are changed to CPU=1, SRB=1, IOC=0, and MSO=0. Conversely, when the last system with a release after z/OS V2R4 has left the sysplex, the WLM policy is refreshed and the service coefficients as specified in your WLM service definition are applied.

System action Processing continues.

Operator response Report this problem to the system programmer.

System programmer response

On a system with z/OS V2R4 or z/OS V2R3, change the service coefficients in your WLM service definition (CPU=1, IOC=0, MSO=0, SRB=1) and review the durations for any multi-period service classes and adjust them accordingly. Also, you might need to adjust your accounting procedures.

Source Workload Manager (WLM)

Module IWMP2RAC,IWMO2MST

Routing code 2,10

Descriptor code 4

IWMH101I The recommended WLM service coefficients are being used. No action is required.

Explanation

z/OS V2R4 is the last release to allow specifying service coefficients in the WLM service definition. With the release after z/OS V2R4, the coefficients are preset to CPU=1, IOC=0, MSO=0, and SRB=1; and cannot be changed. Your currently installed WLM service definition already specifies these values. No action is required.

System action Processing continues.

Operator response None.

System programmer response None.

Problem determination N/A

Source WLM

Module IWMHCADD, IWMHMSG

Routing code N/A

Descriptor code N/A

IWMH102E The recommended WLM service coefficients are not being used.

Explanation

z/OS V2R4 is the last release to allow specifying service coefficients in the WLM service definition. With the release after z/OS V2R4, the coefficients are preset to CPU=1, IOC=0, MSO=0, and SRB=1; and cannot be changed.

One or more of the WLM service coefficients currently in use have a different value and will be ignored after z/OS V2R4:

CPU=cpu IOC=ioc MSO=mso SRB=srb

These values are different because you have specified them in your currently installed WLM service definition or defaults are taken if you did not define them.

System action Processing continues.

Operator response Report this problem to the system programmer.

System programmer response

Change the service coefficients in your WLM service definition (CPU=1, IOC=0, MSO=0, SRB=1) and review the durations for any multi-period service classes and adjust them accordingly. Also, you might need to adjust your accounting procedures.

Problem determination N/A

Source WLM

Reference documentation

See chapter Defining service coefficients and options in z/OS MVS Planning: Workload Management.

Module IWMHCADD, IWMHMSG

Routing code N/A

Descriptor code N/A

z/OS 2.3 SC34-2662-30 - z/OS MVS Planning: Workload Management

z/OS 2.4 SC34-2662-40 - z/OS MVS Planning: Workload Management

Chapter 13. Defining service coefficients and options

Section **CHANGING YOUR COEFFICIENT VALUES** is replaced as follows:

z/OS V2.4 is the last release of z/OS to allow specifying service coefficients in the Workload Manager (WLM) service definition. If the service coefficients are not defined, the current default values are:

CPU	10.0
IOC	5.0
MSO	0.0
SRB	10.0

Given the size and processing capacity of processors, it is no longer meaningful to use high values for service coefficients, or use different weights for CPU and SRB service. In addition, resources like I/O and storage (MSO) are no longer scarce, so it makes no sense to let them influence period switching. Thus, starting with the release after z/OS 2.4, the coefficients are preset to the following values and cannot be changed:

CPU	1
IOC	0
MSO	0
SRB	1

IBM recommends that you use these coefficients in preparation for the release after z/OS V2.4.

If you do decide to change the coefficients, you must review the durations for any multi-period service classes and adjust them accordingly. You might also need to adapt your accounting procedures. Capacity limits of resource groups and tenant resource groups are not affected by the change because they are specified in unweighted service units.

Applying the IBM recommended coefficients simplifies the calculation of the duration (DUR), as follows:

NEW DUR = CPU SERVICE UNITS + SRB SERVICE UNITS

To convert the old duration into the new duration, you can use the following formula:

NEW DUR = (OLD DUR / TOTAL SERVICE) × ((CPU SERVICE / CPU) + (SRB SERVICE / SRB))

In the formula, CPU and SRB are the old service coefficients, and TOTAL SERVICE is the sum of CPU, SRB, IOC, and MSO service. These values should be collected for a peak period interval, such as from an RMF Postprocessor Workload Activity (WLMGL) report.

Example:

- OLD DUR is 90000
- Old default service coefficients used are CPU=10,SRB=10
- Values from RMF WLMGL peak period interval:

```
TOTAL SERVICE = 6218K
CPU SERVICE   = 5877K
SRB SERVICE   = 95667
```

Therefore: $NEW\ DUR = (90000/6218K) \times ((5877K/10) + (95667/10)) = 8645$

Section **USING THE STORAGE (MSO) COEFFICIENT FOR CALCULATIONS** is deleted.

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Part 3. Check Descriptions

Chapter 13. IBM Health Checker for z/OS checks

Workload Manager checks (IBMWLM)

- **ZOSMIGV2R4_NEXT_WLM_ServCoeff (at z/OS 2.4)**
- **ZOSMIGV2R3_NEXT2_WLM_ServCoeff (at z/OS 2.3)**

Description:

Checks if WLM service coefficients other than the IBM recommended values of CPU=1, IOC=0, MSO=0, and SRB=1 were specified in the currently installed WLM service definition.

If the health check is activated and one or more of the WLM service coefficients currently in use have a different value than CPU=1, SRB=1, IOC=0, MSO=0, exception message IWMH102E is issued. Consider to change the service coefficients in the WLM service definition to the IBM recommended values and review the durations for any multi-period service classes and adjust them accordingly. Also, accounting procedures might need to be adjusted.

Reason for check:

z/OS V2.4 is the last release of z/OS to allow specifying service coefficients in the Workload Manager (WLM) service definition. The current default values are CPU=10, SRB=10, IOC=5, MSO=0. Given the size and processing capacity of processors, it is no longer meaningful to use high values for service coefficients, or weight CPU and SRB service differently. In addition, resources like I/O or MSO (main storage occupancy) are no longer scarce. It is not necessary to allow them to influence period switching. Therefore, the coefficients are preset to CPU=1, SRB=1, IOC=0, MSO=0 and cannot be changed starting with the release after z/OS V2.4.

z/OS releases the check applies to: z/OS V2R3 and later.

Type of check (local or remote): Local

User override of IBM values:

The following sample shows the defaults for customizable values for this check. Use this sample to make permanent check customizations in an HZSPRMxx parmlib member used at IBM Health Checker for z/OS startup. If you just want a one-time only update to the check defaults, omit the first line (ADDREPLACE POLICY) and use the UPDATE statement on a MODIFY hzsproc command. Note that using non-POLICY UPDATES in HZSPRMxx can lead to unexpected results and is therefor not recommended.

```
ADDREPLACE POLICY((policyname)) (STATEMENT(name))
UPDATE
CHECK(IBMWLM,ZOSMIGV2R4_NEXT_WLM_ServCoeff)
INTERVAL(TIMER) MINUTES(30)
SEVERITY(LOW)
INACTIVE
DATE('Date of the change')
REASON('Your reason for the change.')
```

Debug support: No

Verbose support: No

Parameters accepted: No

References: For additional information, see z/OS MVS Planning: Workload Management

Messages:

This check issues the following messages:

- IWMH101I
- IWMH102E

See IWMH messages in z/OS MVS System Messages, Vol 9 (IGF-IWM).