



# IBM Integrated Workload Pricing for zEnterprise clients can significantly improve price/performance of collocated workloads on z/OS

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## At a glance

- Can provide significant improvement in price/performance when running collocated workloads
- Improved alignment between software utilization and software charges
- Increased flexibility in application deployment and software licensing

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## Overview

IBM provides Integrated Workload Pricing (IWP) to enhance utilization reporting capabilities of systems running IBM z/OS®, which can improve the price/performance for eligible Monthly License Charge (MLC) programs running within the same logical partition (LPAR) as select defining programs. These programs are listed in the [Description](#) section, **Integrated Workload Pricing Defining Programs**. The IWP enhancements to the reporting capabilities in z/OS enable the IBM Sub-capacity Reporting Tool (SCRT) to calculate the general purpose processor time consumed by eligible defining programs and adjust the reported MSU values for eligible MLC programs running in the same LPAR.

The WebSphere® family of programs for z/OS can help you modernize and extend existing business applications to drive business agility. Significant performance and operational benefits can be achieved when WebSphere middleware is collocated with System z® MLC programs within the same LPAR instead of separate LPARs. However, collocating these programs can have the effect of increasing MLC software charges due to the incremental processing in the LPAR attributable to the running of WebSphere programs. IWP has the potential to adjust and significantly improve the software price performance for certain z/OS programs when they are running in a collocated LPAR with WebSphere IWP Defining Programs, compared to running the programs in a collocated LPAR without IWP.

IWP enhances IBM sub-capacity Advanced Workload License Charges (AWLC) described in the IBM sub-capacity pricing announcement for z/OS. For additional information, refer to Software Announcement [210-238](#), dated July 22, 2010.

For a list of the programs eligible to define the IWP adjustment and those eligible for adjustment, refer to **z/OS programs eligible for IWP option for AWLC sub-capacity clients** in the [Description](#) section.

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## Key prerequisites

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IWP is available only when running specific eligible programs installed on zEnterprise 196 machines that have implemented sub-capacity pricing under AWLC terms and conditions, as specified in the Integrated Workload Pricing addendum to the AWLC.

Prerequisite hardware and software requirements are:

- z196 Enterprise System processor
- z/OS V1.10, or higher, with SMF APAR OA31615
- Installation and use of SCRT V19.2.0
- Use of the SCRT IWP control statement

For z/OS guest systems running under z/VM®, all z/OS guest systems must be at z/OS V1.10, or higher. One of the following is required:

- z/VM V5.4 with APAR VM64798
- z/VM V6.1 with APAR VM64879

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## IWP billing effective date

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Sub-capacity licenses with AWLC charges including the IWP adjustment cannot be billed until users submit a Sub-capacity Report containing programs with MSUs adjusted by IWP. SCRT V19.2.0 is required in order to submit Sub-capacity Reports containing programs adjusted by IWP. SCRT V19.2.0 availability is February 10, 2011.

To enable IWP, z/OS SMF APAR OA31615 must be applied prior to the collection of system utilization data. The earliest date for collecting system utilization data eligible for IWP adjustment is February 2, 2011.

You may generate the first Sub-capacity Report containing MSUs adjusted by IWP on March 2, 2011. This report, for data collected during the February reporting period, may be submitted between March 2 and March 9, 2011, and will have a billing effective date of April 1, 2011. Therefore, the earliest billing effective date for programs with MSUs adjusted by IWP is April 1, 2011.

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## Description

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IWP enhances z/OS system utilization reporting capabilities, which can significantly increase price/performance for eligible MLC programs when running in the same LPAR as select IWP Defining Programs.

### Determining eligibility for Integrated Workload Pricing

IWP requires implementation of AWLC under sub-capacity terms.

### z/OS programs eligible for IWP option for AWLC sub-capacity clients

#### Integrated Workload Pricing Defining Programs

Program ID	Program name
5655-N01	IBM webSphere Application Server for z/OS V6 Service level 16, or higher
5655-N02	IBM webSphere Application Server for z/OS V7
5655-N53	webSphere Process Server for z/OS V6
5655-W05	webSphere Process Server for z/OS V7
5655-M74	webSphere Message Broker for z/OS V6

Level 6.1.0.2, or higher  
 5655-V60 WebSphere Message Broker for z/OS V7  
 5655-R15 WebSphere Enterprise Service Bus for z/OS V6  
 5655-W09 WebSphere Enterprise Service Bus for z/OS V7

Certain programs that run in the same address space as an IWP Defining Program have their processing times in that address space counted as part of the processor time belonging to the IWP Defining Program for the purpose of the IWP calculation. These programs include:

Program ID	Program name
5655-P28	WebSphere Extended Deployment for z/OS V6
5655-S33	WebSphere Extended Deployment Individual Components for z/OS V6
5655-V66	WebSphere Extreme Scale for z/OS V7
5655-V82	WebSphere ILOG JRULES for z/OS
5655-S30	WebSphere Business Services Fabric for z/OS V6
5655-W06	WebSphere Business Services Fabric for z/OS V7
5655-W11	WebSphere Business Monitor for z/OS V7
5655-V54	WebSphere Business Event for z/OS V6
5655-W16	WebSphere Business Event for z/OS V7
5655-R41	WebSphere Service Registry and Repository for z/OS V6
5655-W17	WebSphere Service Registry and Repository for z/OS V7
5655-R17	WebSphere Portal Enable for z/OS V6
5655-W49	WebSphere Portal Enable for z/OS V7

### **MLC programs eligible to be adjusted by Integrated Workload Pricing**

Program ID	Program name
5655-018	CICS/ESA® V4
5655-147	CICS® TS for OS/390
5697-E93	CICS TS for OS/390® V2
5655-M15	CICS TS for z/OS V3
5655-S97	CICS TS for z/OS V4
5655-158	IMS/ESA® V6
5655-B01	IMS™ V7
5655-C56	IMS V8
5655-J38	IMS V9
5635-A01	IMS V10
5635-A02	IMS V11
5635-A03	IMS V12

At this time, Integrated Workload Pricing is available only in connection with select qualified IBM programs known as IWP Defining Programs. IBM may evaluate authorizing additional programs as eligible IWP Defining Programs over time if warranted, based on customer demand and subject to an appropriate level of qualification of those programs.

The corresponding sub-capacity System z IPLA programs with Reference-Based terms receive the same sub-capacity adjustment as their parent program.

### **Calculating the billable MSUs for applicable Monthly License Charge programs**

SCRT calculates the 4-hour rolling average of the general purpose processor time consumed by the IWP Defining Programs and subtracts those values from the traditional sub-capacity values for the MLC programs eligible to be adjusted by IWP, on an hour by hour basis, per LPAR.

For the case where the z/OS system is a guest system running under z/VM, each z/OS guest system is treated as its own LPAR when applying any sub-capacity adjustments for IWP.

The program values for the same hour are summed across all of the LPARs and z/OS guest systems running under z/VM in which the program runs to create an adjusted sub-capacity value for the program, for the given machine, for each hour.

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## Terms and conditions

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Your agreement to IWP terms and conditions is required for the receipt of IWP benefits. You must have a valid license to IBM authorized IWP Defining Programs installed on a zEnterprise 196 machine that has implemented sub-capacity pricing under AWLC terms. All terms and conditions associated with IWP, AWLC, sub-capacity pricing, and the IBM Customer Agreement apply.

The Addendum for Integrated Workload Pricing to Attachment for IBM System z Advanced Workload License Charges (Z125-8702) is available.

AWLC terms and conditions described in the following documents also apply:

- Attachment for IBM System z Advanced Workload License Charges (Z125-8538)
- IBM System z Advanced Workload License Charges Exhibit (Z125-8539)

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