Software Announcement
September 26, 2006

IBM Tivoli Workload Scheduler for z/OS V8.3 is part of an integrated suite of scheduling products that enable systematic enterprise-wide workload processing

Overview

IBM Tivoli® Workload Scheduler for z/OS® V8.3 delivers enhanced workload planning for cross-enterprise operations, including:

- Expanded planning capabilities including the ability to schedule jobs to run multiple times in a day; ability to define waiting times for jobs; management and monitoring of new critical path; enhanced loop recovery capability
- Integrated end-to-end scheduling including seamless integration with Tivoli Workload Scheduler V8.3, and improved correction capability and fault recovery in end-to-end environments
- New integration with Workload Manager that helps optimizes resource utilization in a sysplex environment; enhanced integration with IBM System Automation to automate System z™ resource utilization from within Tivoli Workload Scheduler for z/OS; integration with Tivoli Enterprise™ Portal to provide a new event driven consolidated interface
- A new Web-based console that allows monitoring and control of the Tivoli Workload Scheduler workload

Key prerequisites

Refer to the **Software requirements** and **Hardware requirements** sections

Planned availability date

December 15, 2006

At a glance

- Ability to schedule and run the same job multiple times in a day
- Integrated end-to-end scheduling including seamless integration with Tivoli Workload Scheduler V8.3
- A single point of control for Tivoli Workload Scheduler and the entire Tivoli Dynamic Workload Automation portfolio through the Tivoli Dynamic Workload Console
- New ability to connect distributed Standard Agents and Fault Tolerant Agents directly to the z/OS Master Domain Manager without having to use a distributed Domain Manager, allowing for a lighter weight scheduling network with lower cost of ownership
- Enhanced integration with WLM to prioritize workloads by service classes and dynamically route workloads to best available resources in the Sysplex
- New integration with Tivoli System Automation for z/OS to automate System z resources from within Tivoli Workload Scheduler, including the ability to dynamically start and stop application resources, and mount and unmount volumes for example, according to workload priorities and resource demands
- New integration with Tivoli Enterprise Portal to provide an event driven consolidated interface

For ordering, contact:
Your IBM representative, an IBM Business Partner, or the Americas Call Centers at

800-IBM-CALL Reference: YE001

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Description

IBM Tivoli Workload Scheduler for z/OS is the premier enterprise job scheduling product for System z and end-to-end environments. It automates the planning, processing, and analysis of batch and event-based enterprise production workloads. This can improve IT operating efficiency and reduce manual labor and help maximize throughput of work across the enterprise.

IBM Tivoli Workload Scheduler for z/OS is part of an integrated suite of scheduling products that enable systematic enterprise-wide workload processing — for both batch and event-based (real-time) workloads — across applications and platforms. It includes the following new features, functions, and capabilities.

Feature/function: Enhanced planning and choreography capabilities.

- Capability: Ability to schedule and run the same job multiple times a day, and the ability to define waiting times for jobs.

Feature/function: Enhanced event triggered scheduling capabilities.

- Capability: New product variables for triggered jobs and new capabilities for special resources.

Feature/function: Integrated end-to-end production workload capabilities.

- Capability: Seamless integration with Tivoli Workload Scheduler V8.3, improved correction capabilities and fault recovery in end-to-end environments, and likely reduced network stop time during plan generation.

Feature/function: New critical path management and analysis.

- Capability: Automated promotion of jobs based on critical path analysis to better meet SLAs.

Feature/function: Increased control over SAP environments.

- Capability: Complete batch and event-based scheduling capabilities across end-to-end SAP environments, SAP R/3 certification, ability to dynamically create jobs with full coverage of SAP XBP batch scheduling interface parameters, centralized jobs definition repository.

Feature/function: Enhanced integration with other IBM components.

- Capability: Integration with Workload Manager that helps optimize resource utilization in a sysplex environment, and integration with IBM System Automation to automate System z resource utilization from within Tivoli Workload Scheduler for z/OS, and integration with Tivoli Enterprise Portal to provide a new event driven consolidated interface.

Feature/function: New Web-based console.

- Capability: New, intuitive Web-based operations console for System z and end-to-end environments.

IBM Tivoli Workload Scheduler for z/OS V8.3 can be used to schedule on z/OS agents V8.3, V8.2, and V8.1, also on distributed agents V8.3, V8.2, V8.2.1, and 8.1.

Product positioning

Tivoli Workload Scheduler for z/OS is the premier System z workload automation solution. For calendar and event-triggered workloads, it provides extensive workload planning and choreography capabilities to increase business flexibility, and in-depth critical path analysis to eliminate potential execution problems — so enterprises can easily manage hundreds of thousands of workloads while meeting strict service level guarantees.

Tivoli Workload Scheduler for z/OS forms the basis for dynamic end-to-end enterprise workload automation. It provides a single Web-based point of control and seamless integration with Tivoli Workload Scheduler for Distributed — for managing workloads across multiple business applications, and across System z and distributed platforms. Tivoli Workload Scheduler for z/OS also integrates with IBM Workload Manager to virtualize System z workload infrastructures and dynamically match workload requirements with best available resources based on system loads, capacity, and business policies.

Tivoli Workload Scheduler for z/OS also provides extensive relational value for customers by integrating with the broader Tivoli portfolio. It integrates with Tivoli Enterprise Portal to allow customers to view and manage scheduling events in a broader systems management context. It also integrates with System Automation for z/OS to allow customers the ability to easily automate resources within the scheduling infrastructure, for example, to start/stop applications and mount/unmount volumes from within Tivoli Workload Scheduler.

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).

BP Attachment for Announcement Letter 206-235

https://www.ibm.com/partnerworld/mem/sla.jsp?num=206-235

IBM United States Announcement Supplemental Information

September 26, 2006

Education support

Comprehensive education for IBM Tivoli® products is offered through Worldwide Tivoli Education Delivery Services. A wide range of training options are available, including classes led by instructors, learning on demand, on-site training, and blended learning solutions.

For additional information, visit Web site

http://www-306.ibm.com/software/tivoli /education/

Offering Information

Product information is available via the Offering Information Web site

http://www.ibm.com/common/ssi

Publications

The publication listed below can be downloaded from the following Web site after the planned availability date.

http://www-306.ibm.com/software/tivoli /library/

The following hardcopy publication is shipped with the basic machine-readable material for the z/OS® product:

Title	Form number
IBM Tivoli Workload Scheduler for z/OS V8.3 Program Directory	GI11-4248

The following softcopy publications are shipped, in English, on a publications CD-ROM in displayable softcopy form on the planned availability date.

Title	Form number
IBM Tivoli Workload Scheduler General Information	SC32-1256
Read This First	GI11-6456
IBM Tivoli Workload Scheduler General Information	SC32-1256
IBM Tivoli Workload Scheduler Job Scheduling Console Release Notes	SC32-1258
IBM Tivoli Workload Scheduler Console User¢s Guide	SC32-1256
IBM Tivoli Workload Scheduler Release Notes	SC32-1277
IBM Tivoli Workload Scheduler Planning and Installation Guide	SC32-1273
IBM Tivoli Workload Scheduler Reference Guide	SC32-1274
IBM Tivoli Workload Scheduler Administration and Troubleshooting	SC32-1275
IBM Tivoli Workload Scheduler Database Views	SC32-2261
IBM Tivoli Workload Scheduler Information Roadmap	GI11-6455
IBM Tivoli Workload Scheduler Infocenter	SC32-1499
IBM Tivoli Workload Scheduler Applications Release Notes	SC32-1279
IBM Tivoli Workload Scheduler Applications User¢s Guide	SC32-1278
IBM Tivoli Workload Scheduler Applications Infocenter	SC32-1498
IBM Tivoli Workload Scheduler Applications Quick Start Guide	SC32-1538
IBM Tivoli Workload Scheduler for z/OS Scheduling End to End	SC32-1732
IBM Tivoli Workload Scheduler for z/OS Customization and Tuning	SC32-1265
IBM Tivoli Workload Scheduler for z/OS Installation Guide	SC32-1264
IBM Tivoli Workload Scheduler for z/OS Messages and Codes	SC32-1267
IBM Tivoli Workload Scheduler for z/OS Diagnosis Guide	SC32-1261
IBM Tivoli Workload Scheduler for z/OS Programming Interfaces	SC32-1266
IBM Tivoli Workload Scheduler for z/OS Managing the Workload	SC32-1263
IBM Tivoli Workload Scheduler for z/OS Getting Started	SC32-1262
IBM Tivoli Workload Scheduler for z/OS Quick Start	SC32-1268
IBM Tivoli Workload Scheduler for z/OS Licensed Program Specifications	GI11-4208
IBM Tivoli Workload Scheduler for z/OS Memo to Users	GI11-4209
IBM Tivoli Workload Scheduler for z/OS z/OS Roadmap	GI11-6463

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the U.S.) or customer number for 50 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries free of charge.

News of many publications may be subscribed to via Mysupport.

https://www-1.ibm.com/support/mysupport/us/en/?OpenDocument

Technical information

Specified operating environment

Hardware requirements: IBM Tivoli Workload Scheduler for z/OS V8.3 runs on the hardware platforms that support the operating systems listed in the **Software requirements** section.

Software requirements

IBM Tivoli Workload Scheduler for z/OS V8.3 supports the following operating systems:

- IBM z/OS V1.6.0, or later

Moreover, since the Tivoli Workload Scheduler for z/OS V8.3 will also include the JS Console and the z/OS Connector, the following table provides a list of operating systems supported by these IBM Tivoli Workload Scheduler V8.3 components:

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.

Platform	z/OS Connector	JS Console
AIX(R) V5.1, 5.1.0.c, 5.2, 5.3	x	x
Solaris 8, 9, 10	x	x
Solaris 10 on Opteron		
HP-UX 11.1, 11.2	x	x
HP-UX 11i V2 Itanium		x
Windows(TM) 2000 Professional SP3		x
Windows 2000 Server and Advanced Server SP3	x	x
Windows 2000 Server Data Center SP3		x
Windows 2003 Standard, Enterprise, and Data Center	x	x
Windows 2003 Standard and Enterprise AMD64/EM64T		x
Windows 2003 Standard and Enterprise for 64-bit Itanium Based System		x
Windows XP Pro SP2(R)		x
Red Hat Linux(TM) 2.1 AMD64/EM64T Kernel 32		x
Red Hat Linux 3.0 AS, ES for xSeries(R) Kernel 32	x	x
Red Hat 3.0 on AMD64/EM64T Kernel 32	x	x
Red Hat Linux 3.0 for iSeries(TM) Kernel 64	x	
Red Hat 3.0 for pSeries(R) Kernel 64	x	x
Red Hat Linux 3.0 for zSeries(R) Kernel 32	x	
Red Hat Linux 4.0 for Series Kernel 32		x
Red Hat Linux 4.0 for iSeries Kernel 64		
Red Hat 4.0 for pSeries Kernel 64		x
Red Hat Linux 4.0 for zSeries Kernel 32		
Red Hat 4.0 for AMD64/EM64T		x
SuSE Linux Enterprise Server 8 xSeries Kernel 32	x	x
SuSE Linux Enterprise Server 8 iSeries Kernel 64	x	
SuSE Linux Enterprise Server 9 xSeries Kernel 64	x	x
SuSE Linux Enterprise Server 8 pSeries Kernel 64	x	x
SuSe Linux Enterprise Server 8 zSeries Kernel 32	x	
SuSE Linux Enterprise 9 iSeries Kernel 64	x	
SuSE Linux Enterprise Server 9 pSeries Kernel 64	x	x
SuSE Linux Enterprise Server 9 zSeries	x	
SuSE Linux Enterprise Server 9 for AMD64/EM64T	x	x
Compaq Tru64 5.1		
SGI Irix 6.5.x		
SGI Irix 6.5.x		

The following is the list of operating systems supported by the new Web-based console named Tivoli Dynamic Workload Console:

- AIX V5.2, V5.3
- Solaris 9 on SPARC
- Windows 2000 Professional SP4, Windows 2000 Server and Advanced Server SP4, Windows 2003 Standard, Enterprise, Windows XP Pro SP2
- Red Hat Linux 3.0 AS, ES on IA 32
- Red Hat Linux 3.0 AS on Power64, S/390® 31-bit, zSeries 64-bit
- Red Hat Linux 4.0 AS, ES on IA 32
- Red Hat Linux 4.0 AS on Power64 S/390 31-bit, zSeries 64-bit
- SuSE Linux Enterprise Server 8 on IA32, Power64, S/390 31-bit zSeries 64-bit
- SuSE Linux Enterprise Server 9 on IA32, Power64, S/390 31-bit zSeries 64-bit
- Solaris 9 on SPARC

The following is the list of browsers supported by Tivoli Dynamic Workload Console:

- Internet Explorer V6.0 SP1, or later
- Mozilla V1.7.8, or later

Planning information

Direct customer support: Direct customer support is provided by IBM Operational Support Services — SoftwareXcel. This fee service enhances customers' productivity by providing voice and electronic access into the IBM support organization. IBM Operational Support Services — SoftwareXcel will help answer questions pertaining to usage and suspected software defects for eligible products. Installation and technical support is provided by Global Services. For more information call 800-IBM-4YOU (426-4968).

For technical support or assistance, contact your IBM representative or visit

http://www.ibm.com/support

Packaging

IBM Tivoli Workload Scheduler for z/OS V8.3 is distributed with:

- International Program License Agreement (Z125-3301)
- License Information document (GC23-5626)
- 3480 Tape
- Publications (refer to the **Publications** section)

This program when downloaded from a Web site, contains the applicable IBM license agreement, and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. The license and License Information will be stored in a directory such as LICENSE.TXT for future reference.

Security, auditability, and control

IBM Tivoli Workload Scheduler for z/OS V8.3 uses the security and auditability features of the operating system software. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Software services

IBM services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an unmatched portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support any critical business need.

To learn more about IBM Software Services or to contact a software services sales specialist, visit:

http://www.ibm.com/software/sw-services/

IBM Tivoli Enhanced Value-Based Pricing

IBM Tivoli software products are priced using IBM Tivoli's Enhanced Value-Based Pricing. The Enhanced Value-Based Pricing system is based upon the IBM Tivoli Environment-Managed Licensing Model, which uses a managed-environment approach — whereby price is determined by what is managed rather than the number and type of product components installed.

For example, all servers monitored with IBM Tivoli's monitoring product (IBM Tivoli Monitoring) require entitlements sufficient for those servers. Other IBM Tivoli products may manage clients, client devices, agents,

network nodes, users, or other items, and are licensed and priced accordingly.

Unlike typical systems management licensing models that require entitlements of specific software components to specific systems, the IBM Tivoli Environment-Managed Licensing Model provides the customer flexibility to deploy its IBM Tivoli software products within its environment in a manner that can address and respond to the customer′s evolving architecture. That is, as the architecture of a customer′s environment changes, the customer′s implementation of IBM Tivoli software can be altered as needed without affecting the customer′s license requirements (as long as the customer does not exceed its entitlements to the software).

Under Enhanced Value-Based Pricing, licensing and pricing of server-oriented applications are determined based upon the server′s use in the customer′s environment. Typically, such applications are licensed and priced in a manner that corresponds to each installed and activated processor of the server managed by the IBM Tivoli application to help correlate price to value while offering a simple solution.

Where a server is physically partitioned, this approach is modified. This partitioning technique is the approach used with systems that have either multiple cards or multiple frames, each of which can be configured independently. For servers capable of physical partitioning (for example, IBM′s pSeries Scalable POWERparallel Systems® servers, Sun Ultra servers, and HP Superdome servers), an entitlement is required for each processor in the physical partition being managed by the Tivoli application. For example, assume that a server has 24 processors installed in aggregate. If this server is not partitioned, entitlements are required for all 24 processors. If, however, it is physically partitioned into three partitions each containing eight processors, and Tivoli products were managing only one of the three partitions, then entitlements would be required for the eight processors on the physical partition managed by the IBM Tivoli application.

For servers with virtual or logical partitions, entitlements are required for all installed and activated processors on the server. For each IBM Tivoli application managing a clustered environment, licensing is based on the cumulative number of installed and activated processors on each server in the cluster. Where the cluster includes physically partitioned servers, the considerations described above concerning physically partitioned servers apply as well.

Enhanced Value-Based Pricing recognizes the convergence of RISC/UNIX® and Microsoft™ Windows/Intel® technologies, in order to simplify the customers licensing requirements, and to provide a smoother, more scalable model. Pricing and licensing does not differentiate between non-zSeries server platforms or operating systems. For some products, this platform neutrality extends to zSeries and other host servers as well.

IBM Tivoli Enhanced Value-Based Pricing terminology definitions

Authorized user

An authorized user is one and only one individual (named or unnamed) within or outside your enterprise. A proof of entitlement (PoE) must be obtained for each individual user accessing the program in any manner. A program licensed under an authorized user PoE may be installed on a single computer or server, and accessed by multiple users, provided that a PoE has been obtained for each individual user accessing the program either directly or indirectly (via a multiplexing program, device, or application server) through any means on behalf of the user. Note that authorized users have unique specific identity and IDs cannot be shared.

An ID can establish one or more connections and count as a single authorized user.

Specifics to affected security products

- An authorized user of IBM Tivoli Federated Identity Manager is any ID that accesses an application or service managed or protected by IBM Tivoli Federated Identity Manager.
- An authorized user of IBM Tivoli Directory Integrator (TDI) is one whose identity can be synchronized by TDI or that can access a connected system that can be synchronized by TDI.
- An authorized user of IBM Tivoli Identity Manager is any ID whose identity is recorded in the Tivoli Identity Manager identity store.
- An authorized user of IBM Tivoli Access Manager for e-business is any ID that accesses an application or service managed or protected by IBM Tivoli Access Manager for e-business.

Client device or client

A client device is a computing device that requests the execution of a set of commands, procedures, or applications from another computer system that is typically referred to as a server. Multiple client devices may share access to a common server. A client device generally has some processing capability or is programmable to allow a user to do work. Examples include, but are not limited to, notebook computers, desktop computers, desk side computers, technical workstations, appliances, automated teller machines, point-of-sale terminals, tills and cash registers, and kiosks.

Engine

An engine is also referred to as a central processor (CP) or processor. Engines for traditional workloads are called General Purpose CPs. Engines for Linux workloads are called Integrated Facility for Linux (IFL) engines or Linux-only engines. Engines for Coupling Facility workloads are called Integrated Coupling Facility (ICF) engines.

Enterprise

An enterprise is a person or single entity and the subsidiaries owned by more than 50%.

External user

An external user is an authorized user that is not part of the enterprise.

IFL

This optional facility enables additional processing capacity exclusively for Linux workload, with no effect on the model designation of a zSeries or OS/390® server. Consequently, executing Linux workload on the IFL will not, in most cases, result in any increased IBM software charges for z/OS, OS/390, VM, VSE, or TPF operating systems/applications. There is, as indicated, a charge associated with the IFL, and there may also be a charge for applications which run on the IFL.

The IFL may be dedicated to a single Linux-mode logical partition or it may be shared by multiple Linux-mode logical partitions. Installations should note that the Linux workspace enabled by this facility will not support any of the S/390 traditional operating systems (OS/390, TPF, VSE, or VM). Only Linux applications or Linux operating in conjunction with the Virtual Image Facility™, an environment that operates within a logical partition or in native S/390 mode and provides the capability to create multiple Linux images, are supported by the IBM S/390 IFL.

IBM Tivoli Directory Integrator connected system

A connected system is any directory, database, application, or file integrated or merged by IBM Tivoli Directory Integrator.

IBM Tivoli Storage HSM for Windows terabyte (TB) capacity

IBM Tivoli Storage HSM for Windows TB capacity includes primary HSM disk storage pool size combined with the amount of utilized HSM removable media storage pool. Storage pools are configured on the IBM Tivoli Storage Manager server.

IBM System Storage™ Archive Manager TB capacity

IBM System Storage Archive Manager TB capacity includes primary disk storage pool size combined with the amount of utilized primary removable media storage used by the IBM System Storage Archive Manager server.

Capacity notes

Capacity does not include:

- Copy storage pools for the space-managed data that reside on disk.
- Copy storage pools for the space-managed data that reside on removable media.
- Space used on the IBM Tivoli Storage Manager server for any purpose other than the primary storage of space-managed data.
- Disk on the host being space managed.
- A virtual tape library (VTL) is considered a removable media device, so capacity is based on utilization.
- The minimum amount of capacity that can be purchased is 1 TB.
- Partial capacity will be rounded up to the next whole number of TB.
- Additional capacity must be added in increments of 1 TB

IBM TotalStorage® Productivity Center TB capacity

A TB capacity is each individual TB of storage capacity managed by the IBM TotalStorage Productivity Center products. Managed capacity for the IBM TotalStorage Productivity Center for Replication includes both the source and target devices.

Managed processor (charging under full capacity in the managed environment)

Charges are based on the active processors on the machines in the computing environment affiliated with the program rather than on the server where the program is run. The managed processors which require PoEs are defined both in the **Prices** section of the announcement or the License Information′s program-unique terms.

Notes:

1. IBM defines a physical processor in a computer as a functional unit that interprets and executes instructions. A physical processor consists of at least an instruction control unit and one or more arithmetic and logic units.
2. Multicore technology allows two or more processors (commonly called cores) to be active on a single silicon chip. With multicore technology, IBM considers each core to be a physical processor. For example, in a dual-core chip, there are two physical processors residing on the single silicon chip.
3. The program may **not run** on **some or all** of the processors for which PoEs are required by the program′s valuation method.
4. In the zSeries′ IFL environment, each IFL engine is considered a single physical processor.
5. Threading, a technique which makes a single processor seem to perform as two or more, does **not** affect the count of physical processors.
6. Where blade technology is employed, each blade is considered a separate server and charging is based upon the total number of processors on the blades with which the program is affiliated.
7. Not all processors require the same number of Value Unit entitlements. To determine the number of Value Unit entitlements required, refer to the processor value unit conversion table on the Passport Advantage® Web Site.

MSU

Millions of Service Units (MSU) is defined as millions of CPU service units per hour; the measure of capacity used to describe the computing power of the hardware processors on which S/390 or zSeries software runs. Processor MSU values are determined by the hardware vendor, IBM, or Software Compatible Vendors (SCVs).

For more detailed information about zSeries software pricing, go to:

http://www-1.ibm.com/servers/eserver/zseries/library/refguides/sw_pricing.html

Network node or node

Network nodes include routers, switches, hubs, and bridges that contain a single network node may contain any number of interfaces or ports.

Partitions

A server′s resources (CPU, memory, I/O, interconnects and buses) may be divided according to the needs of the applications running on the server. This partitioning can be implemented with physical boundaries (Physical Partitions) or logical boundaries (Logical Partitions).

Physical Partitions are defined by a collection of processors dedicated to a workload and can be used with systems that have either multiple cards or multiple frames, each of which can be configured independently. In this method, the partitions are divided along hardware boundaries and processors, and the I/O boards, memory and interconnects are not shared.

Logical Partitions are defined by software rather than hardware and allocate a pool of processing resources to a collection of workloads. These partitions, while separated by software boundaries, share hardware components and run in one or more physical partitions.

Port

A port is the physical connection between a device and the network.

Processor (per processor charging under full capacity)

In Full capacity charging, PoEs must be acquired for all activated processors (available for use) that are on the server where the program or a component of the program is run.

Notes:

1. IBM defines a physical processor in a computer as a functional unit that interprets and executes instructions. A physical processor consists of at least an instruction control unit and one or more arithmetic and logic units.
2. Multicore technology allows two or more processors (commonly called cores) to be active on a single silicon chip. With multicore technology, IBM considers each core to be a physical processor. For example, in a dual-core chip, there are two physical processors residing on the single silicon chip.
3. In the zSeries′ IFL environment, each IFL engine is considered a single physical processor.
4. Threading, a technique which makes a single processor seem to perform as two or more, does **not** affect the count of physical processors.
5. Where blade technology is employed, each blade is considered a separate server and charging is based upon the total number of processors on the blade on which the program is run.
6. When a server is shipped with six processors, but two of them are inactive, four processors are active for the customer.
7. Not all processors require the same number of Value Unit entitlements. To determine the number of Value Unit entitlements required, refer to the processor value unit conversion table on the Passport Advantage Web site

http://www.ibm.com/software/passportadvantage

Server

A server is a computer system that executes requested procedures, commands, or applications to one or more user and/or client devices over a network. A PoE must be obtained for each server on which the program or a component of the program is run or for each server managed by the program. Where blade technology is employed, each blade is considered a separate server.

Standby or backup systems

For programs running or resident on backup machines, IBM defines three types of situations: cold, warm and hot. In cold and warm situations, a separate entitlement for the copy on the backup machine is normally not required and typically no additional charge applies. In a hot backup situation, the customer needs to acquire another license or entitlements sufficient for that server. All programs running in backup mode must be solely under the customer′s control, even if running at another enterprise′s location.

As a practice, the following are definitions and allowable actions concerning the copy of the program used for backup purposes:

- Cold — A copy of the program may reside, for backup purposes, on a machine as long as the program is not started. There is no additional charge for this copy.
- Warm — A copy of the program may reside for backup purposes on a machine and is started, but is idling, and is not doing any work of any kind. There is no additional charge for this copy.
- Hot — A copy of the program may reside for backup purposes on a machine, is started, and is doing work. The customer must acquire a license or entitlements for this copy and there will generally be an additional charge.

“Doing work” includes, for example, production, development, program maintenance, and testing. It also could include other activities such as mirroring of transactions, updating of files, synchronization of programs, data or other resources (for example, active linking with another machine, program, database or other resource, and so on), or any activity or configurations that would allow an active hot switch or other synchronized switch over between programs, databases, or other resources to occur.

In the case of a program or system configuration that is designed to support a high availability environment by using various techniques (for example, duplexing, mirroring of files or transactions, maintaining a “heartbeat”, active linking with another machine, program, data base or other resource, and so forth), the program is considered to be doing work in the “hot” situation and a license or entitlement must be purchased.

Terabyte (T/TB)

1 terabyte of managed storage = 2 40 bytes = 1,099,511,627,776 bytes, trillion bytes.

Tivoli Management Points

A Tivoli Management Point is a metric used to compute license quantities and is program specific.

Value Units

A Value Unit is a pricing charge metric for program license entitlements which is based upon the quantity of a specific designated measurement used for a given program. Each program has a designated measurement. The most commonly used designated measurements are processor cores and MSUs. However, for select programs, there are other designated measurements such as Servers, users, client devices, and messages. The number of Value Unit entitlements required for your specific implementation of the given program must be obtained from a conversion table associated with the program. You must obtain a PoE for the appropriate number of Value Unit entitlements for your implementation. The Value Unit entitlements of a given program cannot be exchanged, interchanged, or aggregated with Value Unit entitlements of another program. Whenever the designated measurement is a processor core, not all processors require the same number of Value Unit entitlements. To determine the number of Value Unit entitlements required, refer to the processor value unit conversion table on the Passport Advantage Web site

http://www.ibm.com/software/passportadvantage

Product and licensing Web Sites

A complete list of IBM Tivoli products is available at Web site

http://www.ibm.com/software/tivoli/products

IBM Tivoli product licensing documents are available at Web site

http://www.ibm.com/software/tivoli/products /licensing.html

Pricing examples

IBM Tivoli Workload Scheduler for z/OS

If the customer has installed 1,500 MSUs, the total number of Value Units will be:

MSUs		Value Units/ MSU	Value Units
Base	3	1.00	3.00
Tier A	42	.15	6.30
Tier B	130	.08	10.40
Tier C	140	.04	5.60
Tier D	1,185	.03	35.55
Total	1,500		60.85

When calculating the total number of Value Units, the sum is rounded up to the next integer. So the customer will need to license 61 Value Units in this example.

Value Units for non MSU-based S/390 processors:

System	Value Units/ system
MP3000 H30	3
MP3000 H50	4
MP3000 H70	6
ESL Models	1

Value Units for IBM 9672 processors are based upon the full capacity of these systems. This is applicable to all zSeries systems measured on MSU capacity. Information on MSU capacities can be found in the "IBM System/370™, System/390® and zSeries Machine Exhibit", Z125-3901.

Value Unit exhibit VUE020

Level	Minimum	Maximum	Value Units/MSU
Base	1	3	1
Tier A	4	45	0.15
Tier B	46	175	0.08
Tier C	176	315	0.04
Tier D	316	+	0.03

Ordering information

Current licensees

Current licensees with support in effect will receive instructions on how to order this update.

Current licensees of IBM Tivoli Workload Scheduler for z/OS V8.3 can order the new distribution medium via MES by specifying the desired distribution medium feature number.

Sub-capacity terms and conditions

For sub-capacity terms and conditions, refer to the **Ordering information** section.

Sub-capacity utilization determination

Sub-capacity utilization is determined based on the utilization of an eligible operating system and machine (for example, z/OS running in z/Architecture™ (64 bit) mode on a zSeries (or equivalent server) prior to use.

On/Off Capacity on Demand

The products in this announcement are eligible for On/Off Capacity on Demand (On/Off CoD) with a Temporary Use Charge calculated based on MSUs per-day usage.

Product name	PID
IBM Tivoli Workload Scheduler for z/OS	5698-A17

Program name: IBM Tivoli Workload Scheduler for z/OS
Program PID: 5698-A17

Entitlement identifier	Description	License option/ pricing metric
S010CXL	IBM Tivoli Workload Scheduler for z/OS	Basic OTC, Per MSU-day TUC

Basic license

To order, specify the program product number and the appropriate license or charge option. Also, specify the desired distribution medium. To suppress shipment of media, select the license-only option in CFSW.

Program name: IBM Tivoli Workload Scheduler for z/OS
Program PID: 5698-A17

Entitlement identifier	Description	License option/ pricing metric
S010CXL	Workload Scheduler for z/OS	Basic OTC, per Value Unit

Orderable supply ID	Language	Distribution medium
S010DG2	German	3480 tape cartridge, CD-ROM, and Hardcopy Pub
S010DG0	English	3480 tape cartridge, CD-ROM, and Hardcopy Pub
S010DG3	Spanish	3480 tape cartridge, CD-ROM, and Hardcopy Pub

Subscription and Support PID: 5698-S51

Entitlement identifier	Description	License option/ pricing metric
S010CSM	Workload Scheduler or z/OS	Basic ALC, per Value Unit SW S&S no charge, decline SW S&S

Orderable supply ID	Language	Distribution medium
S010CTM	German	Hardcopy pub
S010CTN	English	Hardcopy pub
S010CTR	Spanish	Hardcopy pub

Software Maintenance

Software Maintenance is included with each product authorization acquired. Software Maintenance provides an easy and effective way by which you have access, during the coverage period, to eligible new versions and releases, and to remote technical support for your covered products.

The technical support included in Software Maintenance provides remote support during normal business hours in your country or location as well as access to escalation management 24 hours a day, 7 days a week, for mission-critical (Severity 1) problems.

With Software Maintenance, you receive the following technical support benefits:

- Telephone access and/or electronic access via the Web to an IBM Customer Support Center.
- Support for routine, short duration installation and usage (how-to) questions and code-related problems.
- Support during normal country business hours, namely prime shift hours, Monday through Friday, excluding national or statutory holidays.
- Support for mission-critical (Severity 1) problems during non-prime shift hours, namely all hours outside normal country business hours including national and/or statutory holidays.
- Two hour response time objective during prime shift for voice and electronic submission. The response objective for critical/emergency problems during offshift is also two hours.
- Access to hints, tips, and frequently asked questions.
- Access to escalation management 24 hours a day, 7 days a week.
- Open Authorized Technical Caller list to submit problems to IBM Support Centers on your behalf. Open to any number of technical specialists within your IS organization. Each caller must be registered through the IBM problem submission Web site in order to submit problems. Problem submission is handled by the site technical contact.
- eCare for Software is an initiative designed to enhance your electronic support experience by providing the following advantages:
  - Single view of IBM distributed software that includes easy/integrated access to the following information and functions:
    - Marketing
    - Technical
    - Developer
    - Business Partner
    - IBM Services
    - Downloads

    http://www.ibm.com/software/support
  - Comprehensive electronic (via the Web) self-help capabilities available 24 hours a day, 7 days a week.
  - Advanced search capabilities.
  - A single interface to the IBM problem submission/management system for IBM distributed software.

Customized Offerings

Product media is shipped only via Customized Offerings (for example, CBPDO, ServerPac, SystemPac®). Non-customized items (CDs, diskettes, source media, media kits) will continue to be shipped via the stand-alone product.

Terms and conditions

Licensing: IBM International Program License Agreement and License Information document. PoEs are required for all authorized use.

The following agreement applies for maintenance and does not require customer signatures:

- IBM Agreement for Acquisition of Software Maintenance (Z125-6011)

Limited warranty applies: Yes

Warranty: This program includes a warranty for one year from acquisition from IBM or an authorized IBM Business Partner. For one year from acquisition of the program, this warranty provides the customer with access to databases containing program information and FAQs, including any known fixes to defects, which the customer can download or otherwise obtain and install.

Money-back guarantee: If for any reason you are dissatisfied with the program and you are the original licensee, return it within 30 days from the invoice date, to the party (either IBM or its reseller) from whom you acquired it, for a refund. For clarification, note that for programs acquired under any of IBM′s On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by the customer.

Copy and use on home/portable computer: No

Volume orders (IVO): No

Passport Advantage applies: No

Software Maintenance applies: No

For operating system software, the revised IBM Operational Support Services — SoftwareXcel offering will provide support for those operating systems and associated products that are not available with the newly announced Software Maintenance offering.

This will ensure total support coverage for your enterprise needs, including IBM and selected non-IBM products. For complete lists of products supported under both the current and revised SoftwareXcel offering, visit

http://www.ibm.com/services/sl/products

For additional information on the revised IBM Operational Support Services, refer to Services Announcement 601-023, dated July 10, 2001.

IBM Operational Support Services — SoftwareXcel: No

iSeries Software Maintenance applies: No

Variable charges apply: No

Educational allowance available: Yes, 15% education allowance applies to qualified education institution customers.

ESAP available: Yes, to qualified customers.

Program support: Enhanced support, called Subscription and Support, includes telephone assistance (voice support for defects during normal business hours) as well as access to updates, releases, and versions of the program as long as support is in effect. The customer will be notified of discontinuance of support with 12 months′ notice.

Sub-capacity terms and conditions

For each zSeries IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the required license capacity. Your required license capacity is based upon the following factors:

- The zSeries IPLA program you select
- The applicable Value Unit Exhibit
- The applicable terms
- Whether your current mainframes are full-capacity or sub-capacity

For more information on the Value Unit Exhibit for the zSeries IPLA program you selected, refer to the **Ordering information** section

Full-capacity mainframes

In cases where full-capacity is applicable, the following terms apply.

Execution-based, z/OS-based, Full-machine-based: The required capacity of a zSeries IPLA program with these terms equals the MSU-rated capacity of the machines where the zSeries IPLA program executes.

For more information on mainframe MSU-rated capacities, visit the Web site

http://www-1.ibm.com/servers/eserver/zseries /library/swpriceinfo/

Reference-based: The required license capacity of a zSeries IPLA program with these terms equals the license capacity of the applicable monthly license charge (MLC) program. This MLC program is called the parent program.

Sub-capacity mainframes

In cases where sub-capacity is applicable, the following terms apply.

Execution-based: The required capacity of a zSeries IPLA sub-capacity program with these terms equals the capacity of the LPARs where the zSeries IPLA program executes.

z/OS-based: The required license capacity of a zSeries IPLA program with these terms equals the license capacity of z/OS (and z/OS.e) on the machines where the zSeries IPLA program executes.

Reference-based: The required license capacity of a zSeries IPLA program with these terms equals the license capacity of the applicable monthly license charge (MLC) program. This MLC program is called the "parent" program.

Full Machine-based: The required license capacity of a zSeries IPLA program with full machine-based terms equals the MSU rate capacity of the machines where the zSeries IPLA program executes.

For more information on mainframe MSU-rated capacities, refer to "The System/370, System/390, and zSeries Machine Exhibit (Z125-3901)" or visit the Mainframes section of the zSeries Exhibits Web site

http://ibm.com/zseries/library/swpriceinfo/

For more information on sub-capacity zSeries IPLA terms and conditions, refer to Software Announcement 204-184 dated August 10, 2004.

Sub-capacity eligibility

To be eligible for sub-capacity charging on select zSeries IPLA programs, you must first implement and comply with all terms of either sub-capacity Workload License Charges (WLC) or sub-capacity Entry Workload License Charges (EWLC). To implement sub-capacity WLC or EWLC, a machine must be zSeries (or equivalent). On that machine:

- All instances of the OS/390 operating system must be migrated to the z/OS (or z/OS.e) operating systems
- Any licenses for the OS/390 operating system must be discontinued
- All instances of the z/OS operating (or z/OS.e) systems must be running in z/Architecture (64-bit) mode

For that machine, you must create and submit a Sub-Capacity Report to IBM each month. Sub-Capacity Reports must be generated using the Sub-Capacity Reporting Tool (SCRT). For additional information or to obtain a copy of SCRT, visit the zSeries Software Pricing Web site

http://ibm.com/zseries/swprice

You must comply with all of the terms of the WLC or EWLC offering, whichever is applicable:

- The complete terms and conditions of sub-capacity WLC are defined in the IBM Customer Agreement — Attachment for zSeries Workload License Charges (Z125-6516).
- The complete terms and conditions for sub-capacity EWLC are defined in the IBM Customer Agreement — Attachment for IBM eServer zSeries 890 and 800 License Charges (Z125-6587).

Additionally, you must sign and comply with the terms and conditions specified in the amendment to the IPLA contract —"Amendment for IBM System z9™ and eServer zSeries Programs Sub-Capacity Pricing (Z125-6929)". Once the amendment is signed, the terms in the amendment replace any and all previous zSeries IPLA sub-capacity terms and conditions.

Sub-capacity pricing terms and conditions

To be eligible for sub-capacity pricing, the machine on which the eligible products are installed and running must be eligible for sub-capacity pricing terms and conditions. Software pricing at less than full machine capacity for eligible products apply when running

- AIX 5L™ V5.1, or later, on an IBM eServer pSeries 690 or equivalent partition-capable operating system and machine
- OS/400® V5.1, or later, running on an IBM eServer iSeries server

- Linux running in an LPAR under AIX 5L V5.1, OS/400 V5.1, or in a partition on an equivalent partition capable operating system and server

Sub-capacity pricing for eligible products is based on the current program pricing methodology but the number of processors will be determined based on the sum of processors for all partitions where the program is defined (used). To obtain pricing at less than full machine capacity for eligible products, you are required to:

- Install and use, when available, IBM′s license use management program which installs with eligible IBM programs.
- Install available updates to the operating system and eligible products such that license use can be accurately managed.
- If the use of sub-capacity pricing terms results in a reduced requirement for entitlements, you can reallocate the entitlement difference by distributing entitlements across a larger or different set of systems, or reserve then for future growth. There will be no refunds for these freed up entitlements. Subscription, Software Maintenance and Support volumes and entitlements for existing contracts will continue at the same levels as the acquired licenses.

On/Off Capacity on Demand

To be eligible for On/Off Capacity on Demand pricing, customers must be enabled for temporary capacity on the corresponding hardware, and the required contract — Z125-6907, Amendment for iSeries and pSeries Temporary Capacity On Demand — Software — must be signed prior to use.

Prices

Prices are unaffected by this announcement.

Order now

To order, contact the Americas Call Centers, your local IBM representative, or your IBM Business Partner.

To identify your local IBM representative or IBM Business Partner, call 800-IBM-4YOU (426-4968).

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The Americas Call Centers, our national direct marketing organization, can add your name to the mailing list for catalogs of IBM products.

Note: Shipments will begin after the planned availability date.

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