



IBM z/OS Management Facility V1.13 delivers new function for simplified software deployment, disk storage management, and a more unified z/OS experience

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At a glance

IBM® z/OS® Management Facility (z/OSMF) V1.13 (5655-S28) is the new face of z/OS. It is the foundation for the future of z/OS system administration simplification. It provides streamlined processes and built-in guidance to address a broad scope of activities, helps create a more integrated z/OS experience, and has the potential for some real time-saving capabilities for system programmers. Enhancements for z/OSMF V1.13 include capabilities to:

- Clone z/OS images and deploy software more easily and consistently, using a new software deployment task
- Define new storage volumes to SMS quickly and easily, using a new DASD management task
- Support easier monitoring of z/OS Capacity Provisioning Manager status, using a new capacity provisioning task
- Create a more unified z/OS experience for system programmers by enabling a new web-enabled ISPF interface from z/OSMF
- Make it easier to maintain highly secure network connections with an updated Configuration Assistant for z/OS Communications Server
- Consolidate monitoring for z/OS and Linux® workload server resources using integrated performance data gatherers for Linux on System z®, Linux on System x®, and AIX® systems in the updated Resource Monitoring task
- Improve monitoring and management of incidents, and sending of diagnostic data using the updated Incident Log task
- Integrate the z/OS experience with the ability to link and launch between z/OSMF applications and between z/OSMF and other browser-accessible applications

In addition to systems management tasks, z/OSMF V1.13 also delivers a new API for z/OS itself. A new RESTful API in z/OSMF can enable any system, whether z/OS or distributed, to submit batch jobs and access batch job information. This API is enabled on z/OS V1.13, and later.

Overview

IBM z/OS Management Facility (z/OSMF) (5655-S28) supports a modern web browser-based management console for z/OS. More than just a veneer over existing functions, z/OSMF is designed to simplify z/OS administration. Guided and automated tasks can help reduce the learning curve and improve productivity. For

example, new system programmers and administrators might need only weeks to become proficient with z/OSMF functions. In addition, embedded active user assistance and wizards can guide you through these tasks, potentially reducing the time needed for these tasks from hours to minutes, or from minutes to seconds.

Version 1.13 of z/OSMF adds valuable new system management tasks

The Software Deployment task is designed to provide the functions needed to create and deploy a copy, or clone, of any existing SMP/E-installed software image, including IBM software installed using ServerPac, CBPDO, or fee-based installation offerings, as well as other vendors' software. The function is intended to help you create and distribute copies of system software, including target libraries, distribution libraries, SMP/E zones, and related data sets you identify.

Software Deployment is designed as a z/OSMF application and is intended to make it easier to manage your software images by simplifying and standardizing these deployment processes. z/OSMF Software Deployment is simple and easy to use, and provides an IBM developed and supported process for deploying software on z/OS.

A new DASD Management task is the foundation for simplified disk storage management. The new task is intended to allow you to perform storage group management tasks from within the application. It is designed to streamline the process of adding volumes to SMS pool storage groups, reducing several manually intensive steps involving multiple applications to a reduced number of steps using a single interface. The DASD Management task is planned to be made available in first quarter 2012 with the PTF for APAR PM40869.

IBM System z On/Off Capacity on Demand (OOCoD) can give you the ability to add or remove System z hardware capacity as needed. The z/OS Capacity Provisioning Manager (in the base of z/OS) can automate the OOCoD process. In z/OSMF V1.13, a new Capacity Provisioning task is designed to support easier monitoring of z/OS Capacity Provisioning Manager status, which can simplify the work of an administrator by reducing the amount of time it takes to get information about capacity provisioning status.

The new ISPF task under the Classic Interfaces category enables you to open and launch classic z/OS ISPF sessions directly from z/OSMF. This can allow you to open multiple sessions in separate panes and navigate to z/OS ISPF application panels from z/OSMF.

Version 1.13 of z/OSMF updates several existing tasks

The Incident Log, introduced with z/OSMF V1.11, is updated with improved incident management and data send capabilities with a new APAR search string, new browse log snapshot via direct launch to ISPF Browse dataset, and utilization of the new Problem Documentation Upload utility in the base of z/OS V1.13.

The Configuration Assistant for z/OS Communications Server, introduced with z/OSMF V1.11, is updated with new Intrusion Detection Services for improved network protection, reusable rules for IP Security (IPSec) to enable you to define a rule once and use it in multiple stacks, the ability to import local IP addresses from active systems, and support for configuration of both z/OS V1.12 and V1.13 stacks from within a single z/OSMF application.

The Workload Management task, introduced with z/OSMF V1.12, is updated with the ability to define fine-grained authorization and give users persistent settings and preferences between sessions.

The Resource Monitoring application, which was introduced in z/OS V1.12 with support for Sysplex Status and Monitoring Desktops, has been updated to provide support for using new integrated performance data gatherers for Linux on System z, Linux on System x, and AIX systems. This application is designed to provide a combined, consistent monitoring solution for these systems in zEnterprise™ ensembles.

New interfaces

z/OSMF now supports SAF-based user authorization, in addition to existing support for repository-based authorization. This is intended to allow you to use your existing SAF-based interfaces to manage z/OSMF user authorization and roles, making z/OSMF security more consistent with z/OS security overall.

New z/OSMF application linking and launching capabilities can provide a more seamless experience for system programmers and administrators as they work with different tools and tasks on the z/OS system. A new API is designed to improve the integration of z/OS tasks by enabling application launching between z/OSMF applications and also between z/OSMF applications and other browser-based applications. Application launching may support context-sensitive connections or simple links. For example, between z/OSMF applications, context-sensitive launching might be used to enter an application at a point where actions can be taken immediately to simplify complex task flows, while simple links would open another application so you could navigate to needed tasks. For instance, you can link from the Incident Log directly to browse a log snapshot data set in ISPF.

In addition to applications designed to simplify system management tasks, z/OSMF V1.13 also delivers a new API you can use to submit batch jobs and retrieve batch job information from z/OS using distributed systems as well as z/OS systems. This new API, which is HTTPS protocol-based and uses Representational State Transfer (REST), is available with z/OS V1.13 with z/OSMF V1.13, and later. This is intended to make z/OS batch processing much more accessible to distributed systems and web-based processes.

Key prerequisites

z/OS V1.13 (5694-A01), or later

Planned availability date

September 30, 2011

Description

z/OSMF supports a modern web browser-based management console for z/OS. More than just a veneer over existing functions, z/OSMF is designed to simplify z/OS administration. Guided and automated tasks can help reduce the learning curve and improve productivity. For example, new system programmers and administrators might need only weeks to become proficient with z/OSMF functions. In addition, embedded active user assistance and wizards can guide you through these tasks, potentially reducing the time needed for these tasks from hours to minutes, or from minutes to seconds.

Version 1.13 of z/OSMF adds valuable new system management tasks

New Software Deployment task

The Software Deployment task is a simplified process for cloning z/OS images and deploying z/OS software and maintenance. The Software Deployment task is a valuable addition to, or even possible replacement for, existing in-house software deployment tools. It can help reduce the incidence of error during the installation of a deployment process and ultimately help reduce the skills needed for deploying z/OS software.

The Software Deployment task is designed to provide the functions needed to create and deploy a copy, or clone, of existing SMP/E-installed software, including:

- IBM software installed from ServerPac, CBPDO, or fee-based installation offerings
- ISV software
- z/OS operating system, and related products
- Subsystems and related products
- Service upgrades for all of the above (via complete replacement)

Central to Software Deployment is its checklist, which is the IBM recommended route for z/OS software deployment codified. The checklist steps users through:

- Selecting the software to deploy (a software instance)
- Reporting missing requisites and possible regressions
- Selecting the deployment objective
- Configuring the target software instance
- Validating the configuration against the target system
- Summarizing the deployment actions
- Generating and executing the deployment jobs

The Software Deployment task requires SMP/E V3.6 (and its CSI - Consolidated Software Inventory) to provide information and perform actions for z/OS software deployment.

The combination of z/OSMF V1.13 and z/OS V1.13 (with SMP/E 3.6) can help:

- Reduce or reallocate resources normally used to develop and maintain in-house deployment tools. The IBM recommended path for cloning/deployment is built in, complete with documentation and support.
- Reduce errors and missed steps in the cloning process. A deployment checklist provides a guide to help avoid missed steps required to deploy software, which includes requisite and regression checks that help reduce errors made prior to deploying software.
- Reduce the SMP/E skill level required by providing a task flow to complete a deployment.

Extensions to the Software Deployment task are planned for first half 2012 with the PTFs for APARs PM40764 and IO14267.

New DASD Management task

The new DASD Management task is the foundation for simplified disk storage management. The new task is intended to allow you to perform storage group management tasks from within the application. It is designed to streamline the process of adding volumes to SMS pool storage groups, reducing several manually intensive steps involving multiple applications to a reduced number of steps using a single interface. The DASD Management task is planned to be made available in first quarter 2012 with the PTF for APAR PM40869.

The DASD Management task allows you to:

- View collections of predefined available volumes with the introduction of the reserve storage pool resource. Once defined, the task can discover these volumes.
- View pool storage group and volume information associated with the active SMS configuration. An alert is displayed if a storage group has exceeded its storage utilization threshold. In addition, the storage group information will display new storage group attributes to be used as policy within the task.
- Add storage to an SMS pool storage group via a new wizard.

The Add Storage wizard can enable you to add storage to an SMS pool storage group more easily than before. It uses the new storage group attributes as policy, if defined within the storage group definition. The Add Storage wizard guides you through the following steps:

- Determining the amount of capacity to add based on the storage utilization goal and available capacity found in the assigned reserve storage pool
- Selecting the volumes to add from the reserve storage pool
- Updating the SCDS with the selected volumes
- Initializing the selected volumes to match the naming convention of the storage group
- Optionally, varying volumes online and activating the changes to the SCDS to make the new capacity available for SMS use

New Capacity Provisioning task

IBM System z On/Off Capacity on Demand (OOCoD) can give you the ability to add or remove System z hardware capacity as needed. The z/OS Capacity Provisioning Manager, in the base of z/OS, can help you manage System z capacity, including automating the OOCoD process.

The Capacity Provisioning Control Center (CPCC) is the user front end to administer capacity provisioning policies. Today, the CPCC is available as a Microsoft® Windows-based stand-alone client. Only part of the CPCC functionality is integrated into the z/OSMF V1.13 Capacity Provisioning task.

In z/OSMF V1.13, the new Capacity Provisioning task is designed to support easier monitoring of z/OS Capacity Provisioning Manager status, which can simplify the work of an administrator by reducing the amount of time it takes to get information about capacity provisioning status. The Windows-based CPCC is still required for administering the z/OS Capacity Provisioning Manager definitions.

The Capacity Provisioning task can perform the following functions:

- Manage, create, modify, and delete CIM connections from a central shared repository. Local and remote CIM servers can be used.
- View the status of a domain. The same data is displayed that is retrieved when a REPORT DOMAIN command on the z/OS console is issued.
- View the active configuration of a domain. The same data is displayed that is retrieved when a REPORT CONFIGURATION command on the z/OS console is issued.
- View the active policy of a domain. The same data is displayed that is retrieved when a REPORT POLICY command on the z/OS console is issued.

New web-enabled "Classic" ISPF Interface

The new ISPF task under the Classic Interfaces category enables you to open and launch classic z/OS ISPF sessions directly from z/OSMF. You can open multiple sessions in multiple panes and navigate to ISPF applications from z/OSMF.

Additionally, this interface will make the ISPF applications URL addressable and thus allow the ability to directly launch to ISPF-based functions from z/OSMF tasks or from external applications. For example, you can launch from the Incident Log directly to browse a log snapshot data set in ISPF.

You can view up to four ISPF screen sessions at the same time. The panels appear similar to classic 3270 layout and can be navigated using both mouse and keyboard. Additional tabs allow you to navigate to other ISPF panels, and TSO/E messages are displayed in a popup window.

Version 1.13 of z/OSMF updates several existing tasks

The Incident Log, introduced with z/OSMF V1.11, is updated with improved incident management and data send capabilities with a new APAR search string, new view job status (via SDSF launch), and utilization of the new Problem Documentation Upload utility in the base of z/OS V1.13.

For z/OSMF V1.13, the Configuration Assistant for z/OS Communications Server, introduced with z/OSMF V1.11, is updated with:

- Retrieving TCP/IP profile information from active TCP/IP stacks, enabling it to import lists of IP addresses that are available for policy configuration.
- Allowing a single instance of the Configuration Assistant to be used to configure both z/OS V1.12 and z/OS V1.13 Communications Server. This is intended to allow you to configure systems in a mixed-release environment from a single instance of the Configuration Assistant running under z/OSMF.
- Allowing a policy rule to be defined once for multiple stacks, to permit more efficient policy configuration for multiple systems without having to individually define every policy rule for every stack.
- z/OS Communications Server intrusion detection technology is planned to be enhanced to add support for IPv6 traffic and also additional attack types, including Enterprise Extender, data hiding, and out of sequence packet denial of service attacks. The Configuration Assistant for z/OS Communications Server is planned to provide a quick and easy interface to create the configuration for this new intrusion detection services (IDS) support.

The z/OS Management Facility Workload Management task, available with z/OSMF V1.12, is updated. The z/OS Management Facility Workload Management task can help simplify the creation, modification, and review of z/OS Workload Manager (WLM) service definitions. For example, to optimize a service definition based on best practices could take hours to read through the z/OS WLM-related manuals. It can now be reduced to minutes because best practices are built into z/OSMF.

In z/OSMF V1.13, the Workload Management task supports fine-grained authorization to better control which users can view, install, or modify service definitions.

Additional z/OSMF Workload Management updates give users persistent settings and preferences between z/OSMF sessions, obviating the need to re-establish settings manually.

The tasks of Resource Monitoring in the Performance category are renamed with Version 1.13. The Sysplex Status task is now called *System Status*. The Resource Monitoring task is the successor of Monitoring Desktops. Performance desktops are now called *dashboards*.

Resource Monitoring is updated to monitor Linux on System z, Linux on System x, and AIX systems to provide a consistent monitoring solution for zEnterprise ensembles. You can manage the AIX system complexes (IBM System p®) and Linux system complexes (System z and IBM System x) to be monitored in the Resource Monitoring task. The Resource Monitoring task uses the new z/OS RMF™ Cross Platform (RMF XP) Distributed Data Server. With RMF XP, you can monitor all operating systems that can run on an IBM zEnterprise System, including the zEnterprise BladeCenter® Extension (zBX). However, RMF XP does not necessarily require zBX hardware. You can monitor all AIX and Linux systems to which RMF XP can establish a TCP/IP connection.

Resource Monitoring supports to combine performance metrics of various platforms in the same dashboard to allow you to have a quick overview of the overall status of the zEnterprise ensembles.

New interfaces

New z/OSMF application linking and launching capabilities can provide a more seamless experience for system programmers as they work with different tools and tasks on the z/OS system. A new API is designed to improve the integration of z/OS tasks by enabling application launching not only between z/OSMF applications, but between z/OSMF applications and other browser-based applications as well. Application launching may support context-sensitive connections or simple links. For example, between z/OSMF applications, context-sensitive launching might be used to enter an application at a point where actions can be taken immediately to simplify complex task flows, like launching directly from Incident Log to ISPF browse to view the log snapshot for an incident. Simple links would open another application so you could navigate to needed tasks. The launch point URLs defined via events

and handlers may be registered via the REST API or the Application Linking Manager task in z/OSMF.

New to z/OSMF V1.13 is the z/OS jobs REST interface. The interface is a set of REST services that allow a client application to perform operations with batch jobs on a z/OS system. Operations such as submit a job to run on z/OS, obtain the status of a job, list the spool files for a job, retrieve the contents of a job spool file, cancel a job, or purge a job from the JES spool can be performed. The z/OS jobs REST interface services can be invoked by any HTTP client application, running on the z/OS local system or a remote system, both z/OS or non z/OS.

z/OSMF is enhancing its security model to provide better integration with enterprise security management products. The z/OSMF SAF mode authorization support brings tighter integration with z/OS SAF-based authorization with the introduction of the new resource class ZMFAPLA for z/OSMF task-based resources. All z/OSMF tasks and links will be associated with resource names and resource class profiles under the new resource class, and SAF groups will represent roles. SAF mode further allows for custom roles via creation of SAF groups at the customer's discretion.

IBM specialty engines

A large portion of the z/OSMF application is written in Java™ and is, therefore, eligible for the IBM System z Application Assist Processor (zAAP). Some functions in z/OSMF use the Common Information Model (CIM) Server. As of z/OS V1.11, portions of this workload are eligible for zAAP. Some functions in z/OSMF use the CIM Server, and as of z/OS V1.11, portions of this workload are eligible for the IBM System z Integrated Information Processor (zIIP). As of z/OS V1.11, IBM also introduced a zAAP on zIIP capability, where zAAP-eligible workloads may run on the zIIP processor. For the new zAAP on zIIP capability, refer to Software Announcement [209-242](#), dated August 18, 2009.

Accessibility by people with disabilities

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

http://www.ibm.com/able/product_accessibility/index.html

Value Unit-based pricing

Value Unit pricing for eligible IBM System z IBM International Program License Agreement (IPLA) programs enables a lower cost of incremental growth and enterprise aggregation. Each System z IPLA product with Value Unit pricing has a single price per Value Unit and a conversion matrix, called *Value Unit Exhibit*, for converting from some designated measurement to Value Units. Most commonly, Millions of Service Units (MSUs) is the measurement designated by IBM to be converted to Value Units. Some other measurements are engines or messages. Since MSUs are the most common measurement, that measurement will be used for the remainder of this description.

Value Unit pricing offers price benefits for you. For each System z 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*. Each of the various Value Unit Exhibits stipulate that the larger your required license capacity, the fewer Value Units per MSU you will need. Value Unit Exhibits are uniquely identified by a three-digit code and referred to using the nomenclature VUExxx, where xxx is the three-digit code.

Subsequent acquisitions of Value Unit priced programs offer additional price benefits. The quantity of each System z IPLA program that you have acquired is referred to as *entitled license capacity*. If you want to grow your entitled license capacity for a System z IPLA program, the calculation to determine additional needed Value Units is based upon the number of Value Units already acquired.

For each System z IPLA program with Value Unit pricing, you should:

- Determine the required license capacity, in MSUs
- Aggregate the MSUs across the enterprise
- Convert the total MSUs to Value Units, using the applicable Value Unit Exhibit
- Multiply the price per Value Unit by the total number of Value Units to determine the total cost

To simplify conversion from the designated measurement to Value Units or vice-versa, use the Value Unit Converter Tool. For additional information or to obtain a copy of the Value Unit Converter Tool, visit the Value Unit Converter Tool website

<http://ibm.com/zseries/swprice/vuctool>

Note that Value Units of a given product cannot be exchanged, interchanged, or aggregated with Value Units of another product.

To determine the required license capacity for the System z IPLA program you selected, refer to the [Terms and conditions](#) section.

Product positioning

Eight years ago, IBM announced the Mainframe Charter, a long-term strategic vision that solidified IBM's commitment to the platform. This was followed by the System z simplification strategy that promised to deliver operational simplification to the System z platform.

The z/OS Management Facility is just one example of IBM's promise to deliver on its commitments.

IBM z/OS Management Facility (z/OSMF, 5655-S28) is the new face for z/OS. More than just a veneer over existing functions, z/OSMF is designed to simplify z/OS administration. Guided and automated tasks can help reduce the learning curve and improve productivity. For example, new system programmers and administrators might need only weeks to become proficient with z/OSMF functions. In addition, embedded active user assistance and wizards can guide you through these tasks, potentially reducing the time needed for these tasks from hours down to minutes.

IBM's commitments to the mainframe are long-term and they promise to deliver value in a wide array of areas. Over the years, IBM has delivered on a multitude of software and operating system capabilities designed to save administrative time on a daily basis. Additional product enhancements include:

- Enhanced productivity with DB2® 10, enabling up to six times the number of SAP users on a single system, time travel temporal capabilities built directly into the database, and direct row access accelerating high performance applications.
- Cross-platform application development in a collaborative development environment for greater efficiency through the Rational® Developer for System z Unit Test feature and Rational Team Concert™ products.
- Common tooling environment with integrated access to the data and control capabilities for CICS® architects, developers, system programmers, and administrators (CICS Explorer™, CICS Deployment Assistant, and Problem Determination Tools V11).
- Single platform for the management of business and IT services across the entire infrastructure (Tivoli® Integrated Service Management for zEnterprise) with integration with zManager to provide a single hardware and software view. It includes Application Performance Management, Asset and Financial Reporting, and Application Automation and Resilience.

Statement of direction

IBM intends to withdraw support for Repository mode z/OSMF user authorization in a future release. Both modes are being currently supported to allow customers time to enable the new SAF mode authorization for z/OSMF.

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

Program number

Program name	Program number
z/OS Management Facility v1.13	5655-S28
z/OS Management Facility v1.1 Subscription and Support	5655-S29

Product identification number

Program PID number	Software Subscription and Annual Support PID number
5655-S28	5655-S29

Education support

IBM training provides education to support many IBM offerings. Descriptions of courses for IT professionals and managers are on the IBM training website

<http://www.ibm.com/services/learning/>

Call IBM training at 800-IBM-TEACH (426-8322) for catalogs, schedules, and enrollments.

Offering Information

Product information is available via the Offering Information website

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

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).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=211-242>

Publications

The following publications are supplied automatically with the basic machine-readable material:

Title	Order number
Program Directory	GI11-4327
Program Directory	GI11-2886
License Information Document	GC52-1263

The following additional product publications are available upon general availability:

- *IBM z/OS Management Facility Messages* (SA38-0654)
- *IBM z/OS Management Facility Configuration Guide* (SA38-0652), which can be found at
<http://www.ibm.com/systems/z/os/zos/zosmf/>
- *IBM WebSphere® Application Server OEM Edition for z/OS Configuration Guide, Version 7.0* (GA32-0631), which can be found at
<http://www.ibm.com/systems/z/os/zos/zosmf/>

The IBM Publications Center

<http://www.ibm.com/shop/publications/order>

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 20 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.

Technical information

Specified operating environment

Hardware requirements

IBM z/OS Management Facility V1.13 runs on these IBM System z servers:

- z196
- z114
- z10 BC™
- z10 EC™
- z9® BC¹
- z9 EC¹
- z900¹
- z990¹
- z800¹
- z890¹

¹ These products are withdrawn from marketing.

Software requirements

- z/OS V1.13 (5694-A01), or later

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a

readme file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

Software Services

IBM Software 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 extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

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

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

Ordering information

Charge metric

Program name	Part number or PID number	Charge metric
z/OS Management Facility V1.13	5655-S28	Per Value Unit

The programs in this announcement all have Value Unit-Based pricing.

Program number	Program name	Value Unit exhibit
5655-S28	z/OS Management Facility V1.13	VUE007

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

Ordering z/OS through the Internet

ShopzSeries provides an easy way to plan and order your z/OS ServerPac or CBPDO. It will analyze your current installation, determine the correct product migration, and present your new configuration based on z/OS. Additional products can also be added to your order (including determination of whether all product requisites are satisfied). ShopzSeries is available in the US and several countries in Europe. In countries where ShopzSeries is not available yet, contact your IBM representative (or IBM Business Partner) to handle your order via the traditional IBM ordering process. For more details and availability, visit the ShopzSeries website at

<http://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp>

Value Unit Exhibit VUE007

	MSUs minimum	MSUs maximum	Value Units/MSU
Base	1	3	1
Tier A	4	45	0.45
Tier B	46	175	0.36
Tier C	176	315	0.27
Tier D	316	+	0.2

Value Units for mainframes without MSU ratings:

Hardware	Value Units/machine
MP3000 H30	6
MP3000 H50	8
MP3000 H70	12
ESL models	2

Ordering example

The total number of Value Units is calculated according to the following example.

If your required license capacity is 1,500 MSUs for your selected System z IPLA product, the applicable Value Units would be:

Translation from MSUs to Value Units

	MSUs	*	value Units/MSU	=	Value Units
Base	3	*	1.00	=	3.00
Tier A	42	*	.45	=	18.90
Tier B	130	*	.36	=	46.80
Tier C	140	*	.27	=	37.80
Tier D	1,185	*	.20	=	237.00
Total	1,500				343.50

When calculating the total number of Value Units, the sum is to be rounded up to the next integer.

Ordering the z/OS Management Facility Subscription and Support

Contact your IBM representative or your IBM Business Partner to order z/OS Management Facility V1.1 Subscription and Support (5655-S29).

Program name: z/OS Management Facility V1.13
Program PID: 5655-S28

Entitlement identifier	Description	License option/ Pricing metric
S014P46	z/OS Management Facility	Basic OTC, per Value Unit

Orderable supply ID	Language	Distribution medium
S016MGZ	English	3590 media

Subscription and Support PID: 5655-S29

Entitlement identifier	Description	License option/ Pricing metric
S014P48	z/OS Management Facility S&S	Basic ASC, per Value Unit SW S&S No charge, decline SW S&S

Orderable supply ID	Language	Distribution medium
S014P2D	English	Hardcopy Pub

Basic license

Subscription and Support

To receive support for suspected defects from the support center and future releases and versions at no additional charge, z/OS Management Facility V1.2 Subscription and Support must be ordered. The capacity of Subscription and Support (Value Units) must be the same as the capacity ordered for the product licenses.

To order, specify the Subscription and Support program number (5655-S29) and the appropriate license or charge option.

IBM is also providing Subscription and Support for these products via a separately purchased offering under the terms of the IBM International Agreement for Acquisition of Software Maintenance (IAASM). z/OS Management Facility V1.1 Subscription and Support (5655-S29):

- Includes and extends the support services provided in the base support to include support for suspected defects.
- Entitles you to future releases and versions, at no additional charge. Note that you are not entitled to new products.

When Subscription and Support is ordered, the charges will automatically renew annually unless cancelled by you.

The combined effect of the IPLA license and the Agreement for Acquisition of Software Maintenance gives you rights and support services comparable to those under the traditional ICA S/390® and System z license or its equivalent. To ensure that you continue to enjoy the level of support you are used to in the ICA business model, you must order both the license for the program and the support for the selected programs at the same Value Unit quantities.

Single version charging

To elect single version charging, you must notify and identify to IBM the prior program and replacement program, and the machine the programs are operating on.

Customized Offerings

Product deliverables are shipped only via CBPDO, ServerPac, and SystemPac®.

CBPDO and ServerPac are offered for Internet delivery in countries where ShopzSeries product ordering is available. Internet delivery reduces software delivery time and allows you to install software without the need to handle tapes. For more details on Internet delivery, refer to the ShopzSeries help information at

<http://www.software.ibm.com/ShopzSeries>

You choose the delivery method when you order the software. IBM recommends Internet delivery. In addition to Internet and DVD, the supported tape delivery options for CBPDO, ServerPac, and SystemPac include:

- 3590
- 3592

Most products can be ordered in ServerPac and SystemPac the month following their availability on CBPDO. z/OS can be ordered via all three offerings at general availability. Production of software product orders will begin on the planned general availability date.

- CBPDO shipments will begin one week after general availability.
- ServerPac shipments will begin two weeks after general availability
- SystemPac shipments will begin four weeks after general availability due to additional customization, and data input verification.

Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage® Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

License Information form number

GC52-1263-00

The program's License Information will be available for review on the IBM Software License Agreement website

<http://www.ibm.com/software/sla/sladb.nsf>

Limited warranty applies

No

Money-back guarantee

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the 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 you.

Volume orders (IVO)

No

Passport Advantage applies

No

Software Subscription and Support 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 Software Subscription and Support (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 offering, visit

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

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Yes. A 15% education allowance applies to qualified education institution customers.

Prices

For additional information and current prices, contact your local IBM representative.

Program name: z/OS Management Facility v1.13
 Program PID: 5655-S28

Entitlement identifier	Description	License option/ Pricing metric
S014P46	z/OS Management Facility	Basic OTC, per value unit

Subscription and Support PID: 5655-S29

Entitlement identifier	Description	License option/ Pricing metric
S014P48	z/OS Management Facility S&S	Basic ASC, per Value Unit SW S&S No charge, decline SW S&S

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