IBM Z Monitoring Suite 1.3 and IBM Z Service Management Suite 2.3 deliver latest IBM z16 and middleware exploitation; IBM Z NetView 6.4 updates added to IBM Z Service Automation Suite 1.5, IBM Z Service Management Suite 2.3, and IBM Z NetView for Continuous Availability 6.4

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## **Overview**

# IBM Z<sup>(R)</sup> Service Management Suite 2.3

IBM Z Service Management Suite 2.3 helps deliver robust monitoring, observability, and automation management, including asset discovery, with an embedded ChatOps engagement model. It forms the foundation of the journey to AIOps for IBM Z to support the dynamic growth of transaction workload and data sharing for the modern hybrid cloud.

New in IBM Z Service Management Suite 2.3:

- IBM Z NetView 6.4 provides a modernized user experience through integration of technologies and accelerating user productivity along with network management enhancements and increased security capabilities.
- IBM Z OMEGAMON<sup>(R)</sup> for CICS<sup>(R)</sup> 5.6 product upgrade with multiple enhancements, including exploitation for IBM<sup>(R)</sup> CICS Transaction Server for z/OS<sup>(R)</sup> 6.1 and new workspaces showing CICS Transaction program execution and performance.
- IBM OMEGAMON for Db2<sup>(R)</sup> Performance Expert on z/OS 5.5, formerly known as IBM Tivoli<sup>(R)</sup> OMEGAMON XE for Db2 Performance Expert on z/OS, product upgrade that delivers monitoring and exploitation for IBM Db2 13 for z/OS.
- IBM OMEGAMON now supports IBM's z/OS Pervasive encryption for its history files.

See the Description section for the complete list of components contained within each suite.

## IBM Z Monitoring Suite 1.3

IBM Z Monitoring Suite combines the necessary breadth and depth of resource monitoring of the IBM OMEGAMON family with IBM Service Management Unite Enterprise Edition (designed to provide a comprehensive IT operations dashboard and problem isolation environment), linking monitoring, scheduling, and automation. In addition, IBM Z Monitoring Suite includes IBM Resource Measurement Facility, which provides a data collection capability in a one-time charge licensing option.

IBM Z Monitoring Suite provides real-time and historical monitoring and availability management of critical z/OS infrastructure and key subsystems, such as IBM CICS, IBM Information Management System (IMS), IBM Db2, IBM WebSphere® Application Server for z/OS, and IBM MQ for z/OS.

IBM Z Monitoring Suite 1.3 enhancements include:

- IBM Z OMEGAMON for CICS 5.6 product upgrade with multiple enhancements, including exploitation for IBM CICS Transaction Server for z/OS 6.1 and new workspaces showing CICS Transaction program execution and performance.
- IBM OMEGAMON for Db2 Performance Expert on z/OS 5.5 product upgrade that delivers monitoring and exploitation for IBM Db2 13 for z/OS.
- IBM OMEGAMON now supports IBM's z/OS Pervasive encryption for its history

#### IBM Z Service Automation Suite 1.5

IBM Z Service Automation Suite 1.5 offers a single point of control for a broad range of systems management functions. The suite provides the visibility, control, and automation of a large range of system elements spanning the hardware and software resources of enterprises in a sysplex. IBM Z Service Automation Suite provides automation, network management, and scheduling with an embedded ChatOps engagement model to address business agility on IBM Z.

IBM Z Service Automation Suite is designed to be a simply priced, easy-to-order package of products that can enable easy deployment of an integrated set of systems management functions.

New in IBM Z Service Automation Suite 1.5:

• IBM Z NetView 6.4 provides a modernized user experience through integration of technologies and accelerating user productivity along with network management enhancements and increased security capabilities.

See the Description section for the complete list of components contained within each suite.

## IBM Z NetView for Continuous Availability 6.4

IBM Z NetView for Continuous Availability is designed to help create an automated, cross-platform disaster recovery solution at virtually any distance between a primary site and a recovery site.

IBM Z NetView for Continuous Availability 6.4 provides enhancements in the following areas:

- Monitoring of replication workloads is extended to provide aggregated information for a workload that contains objects from multiple database management systems. These include Db2 tables, IMS databases, and VSAM files. The enhanced aggregated data is displayed in the Tivoli Enterprise Portal Replication Workloads workspace and in the output of the ACTVREPL WORKLOAD=workload name VIEW=SUMMARY command.
- EIF AA replication heartbeat processing is enhanced to support a max\_latency\_time attribute provided by IBM InfoSphere<sup>(R)</sup> Data Replication for IMS for z/OS and IBM InfoSphere Data Replication for VSAM for z/OS in APAR PH32520.

IBM Z OMEGAMON for CICS 5.6 (formerly known as IBM OMEGAMON for CICS on

OMEGAMON for CICS is a performance monitor that provides subject matter specialists, such as systems programmers, with the capability to manage IBM CICS Transaction Server for z/OS and IBM CICS Transaction Gateway for z/OS resources and workloads. It integrates with other members of the OMEGAMON portfolio to provide a powerful cross-subsystem problem determination toolset and is designed

to help subject matter specialists manage and monitor their systems with greater ease.

New enhancements include:

- Powerful new diagnostic feature for program tracking.
- Refined resource-limiting resolution for CPU to allow actions to be taken much sooner to prevent tasks from impacting the region.
- CICS Transaction Gateway Memory statistics are now available.
- Support for IBM CICS Transaction Server for z/OS 6.1.

## **Key requirements**

For additional details about these programs, see the Technical information section.

## Planned availability date

June 17, 2022

Availability within a country is subject to local legal requirements.

See the Availability of national languages section for national language availability.

## **Description**

#### IBM Z Service Management Suite 2.3

IBM Z Service Management Suite 2.3 delivers robust monitoring, observability, and automation management, including asset discovery, with an embedded ChatOps engagement model. It forms the foundation of the journey to AIOps for IBM Z to support the dynamic growth of transaction workload and data sharing for the modern hybrid cloud.

IBM Z Service Management Suite 2.3 contains the following:

- IBM Z System Automation 4.3
- IBM Z NetView 6.4
- IBM Z Software Asset Management 8.2
- IBM Z ChatOps 1.1.2
- IBM Service Management Unite 1.1.9
- IBM Z OMEGAMON Monitor for z/OS 5.6
- IBM Z OMEGAMON Network Monitor 5.6
- IBM Z OMEGAMON Integration Monitor 5.6
- IBM Z OMEGAMON for CICS 5.6
- IBM OMEGAMON for IMS on z/OS 5.5
- IBM OMEGAMON for Messaging on z/OS 7.5
- IBM Z OMEGAMON for JVM 5.5
- IBM OMEGAMON for Storage on z/OS 5.5
- IBM OMEGAMON for Db2 Performance Expert on z/OS 5.5
- IBM Tivoli Composite Application Manager for Application Diagnostics on z/OS 7.1.0

The previously mentioned programs also are available as stand-alone offerings in addition to the IBM Z Service Management Suite 2.3, except for the following:

- IBM Z Service Management Unite 1.1.9
- IBM Z OMEGAMON Monitor for z/OS 5.6
- IBM Z OMEGAMON Network Monitor 5.6
- IBM Z OMEGAMON Integration Monitor 5.6
- IBM Z ChatOps 1.1.2

Organizations have the capability to upgrade to the IBM Z Service Management Suite if they own any of the component products.

#### IBM Z Monitoring Suite 1.3

IBM Z Monitoring Suite is a suite of 13 integrated offerings that help provide real-time and historical monitoring and availability management of z/OS infrastructure and key subsystems, such as CICS, IMS, Db2, WebSphere Application Server for z/OS, and MQ for z/OS.

IBM Z Monitoring Suite 1.3 contains:

- IBM Z OMEGAMON Monitor for z/OS 5.6
- IBM Z OMEGAMON Network Monitor 5.6
- IBM Z OMEGAMON Integration Monitor 5.6
- IBM Z OMEGAMON for CICS 5.6
- IBM OMEGAMON for IMS on z/OS 5.5
- IBM OMEGAMON for Messaging on z/OS 7.5
- IBM Z OMEGAMON for JVM 5.5
- IBM OMEGAMON for Storage on z/OS 5.5
- IBM OMEGAMON for Db2 Performance Expert on z/OS 5.5
- IBM Tivoli Composite Application Manager for Application Diagnostics on z/OS 7.1.0
- IBM Z Service Management Unite 1.1.9
- IBM Resource Measurement Facility for z/OS
- IBM Z ChatOps 1.1.2

The previously mentioned programs also are available on an individual basis in addition to the IBM Z Monitoring Suite, except for:

- IBM Z Service Management Unite 1.1.9
- IBM Z OMEGAMON Monitor for z/OS 5.6
- IBM Z OMEGAMON Network Monitor 5.6
- IBM Z OMEGAMON Integration Monitor 5.6
- IBM Z ChatOps 1.1.2

**Note:** Clients can qualify to upgrade to the IBM Z Monitoring Suite if they currently own Resource Measurement Facility or one of the individual OMEGAMON offerings.

Contact your IBM representative for more details and options to purchase.

## IBM Z Service Automation Suite 1.5

IBM Z Service Automation Suite helps deliver automated operations, network management, and batch workload scheduling.

IBM Z Service Automation Suite contains the following:

- IBM Z System Automation 4.3
- IBM Z NetView 6.4
- IBM Z Workload Scheduler 10.1

- IBM Service Management Unite 1.1.9
- IBM Z ChatOps 1.1.2

Clients who have an active subscription and support license for any of the component products have the capability to upgrade to the IBM Z Service Automation Suite 1.5. Contact your IBM representative for more information.

## **IBM Z System Automation 4.3**

IBM Z System Automation is a policy-based, self-healing, high-availability solution to optimize efficiency and availability of critical systems and applications. It is designed to reduce administrative and operational tasks, customization and programming effort, and automation implementation time and costs that are associated with IBM Parallel Sysplex<sup>(R)</sup> automation and policy-based automation. Using the tight integration with GDPS<sup>(R)</sup>, IBM Z System Automation provides sophisticated disaster recovery capabilities for IBM Z.

Downloads, software requirements, hardware requirements, and details of new capabilities for IBM Z System Automation are provided in the Customer access Portal website.

### IBM Z NetView 6.4

IBM Z NetView 6.4 provides automation, and network and systems management to address your requirements for business agility on IBM Z. Key capabilities and advanced functions include networking and automation, enhanced enterprise integration, and client time-to-value. System and network automation is provided by IBM Z NetView and addresses the continued drive for increased IT workload and automation. Because network requirements are ever-increasing, largely because of mobile phones, the need for a robust network management solution becomes increasingly important.

IBM Z NetView 6.4 continues to provide a modernized user experience through the integration of technologies that may aid in productivity. This is accomplished by introducing three new IBM Z NetView plug-ins for Zowe™ CLI:

- Base plug-in enables clients to access core NetView information and issue most NetView commands. The specific categories of data are:
  - Canzlog messages
  - Task utilization information
  - List of NetView domains to which commands can be sent
  - Authentication to NetView through the NetView REST Server

Note: You must download this plug-in if you want to use the network and automation plug-ins

- Automation plug-in enables you to manage automation table members or statements:
  - Activate an automation table member.
  - Download an automation table member.
  - List active automation tables.
  - Run a simulated test of an automation table statement.
  - Upload an automation table statement.
  - Validate an automation table member.
- Network plug-in enables you to monitor your network:
  - Display distributed DVIPA (DDVIPA) health information.
  - Display distributed DVIPA (DDVIPA) statistics.

IBM Z NetView 6.4 provides the following additional enhancements:

- Display of messages queued on attended and automated operator tasks. This
  enables the user to see what is queued up on a task behind a process that is not
  completing, thus allowing the user to make an informed decision on whether to
  recycle, stop, or reset the task.
- Support for z/OS symbol names of up to 16 characters with a maximum substitution text of up to 44 characters (including spaces), as defined by z/OS. The following areas have been enhanced for this support:
  - Some configuration samples, such as CxxSTGEN, CNMSTUSR, and CNMPOLCY
  - PIPE SUBSYM stage
- Network management enhancements:
  - IBM z/OS V2.5 Communications Server enhanced the z/OS Encryption Readiness Technology (zERT) function to provide enforcement of network encryption standards. The zERT policy-based enforcement (zERT enforcement) solution allows policy-based rules that describe different levels of cryptographic protection along with optional actions to take when TCP connections match those rules. zERT enforcement actions enable immediate notification through messages, auditing through SMF records, and automatic connection termination when questionable or unacceptable cryptographic protection is detected. IBM Z NetView catches the syslogd and SMF record notifications and generates a message upon which users can automate an action.
  - The SNMP requirement is removed for:
    - -- Displaying of interfaces using Discovery Manager
    - -- Packet trace
      - This enhancement provides time-to-value because SNMP no longer needs to be configured for this function.
  - The NVSNMP command support for SNMPv3 allows additional security parameters to be issued. SNMPv3 requires a username, and authentication and encryption can optionally be specified.

### Security

- The use of encrypted data sets, as supported by DFSMS and IBM z/OS Integrated Cryptographic Service Facility (ICSF). IBM Z NetView supports encrypted:
  - -- Partitioned data sets extended (PDSEs), such as DSIPARM and Canzlog archive data sets
  - -- VSAM data sets, such as DSILOGP/DSILOGS
- Ability to prevent the echoing, logging, and tracing of sensitive information about a command. See the CNMSELTE DSIPARM member.
- NetView Enterprise Management Agent
  - Support is provided for Extended Access Volume usage for history performance information. The IBM Z NetView Enterprise Management Agent now includes the use of OMEGAMON persistent data store (PDS V2) large file setup for history information. This may improve performance and increases the amount of information that can be stored for history information.

The following functions are no longer available in IBM Z NetView 6.4:

- NetView Web Services Gateway (SOAP Server)
- SNA Topology Manager
- The NetView task DSIWBTSK that provided support for the NetView Web Application Server
- Correlation Engine
- MultiSystem Manager support
- SECOPTS.AUTHCHK.TARGETID command authorization security option

## IBM Z Software Asset Management 8.2

IBM Z Software Asset Management 8.2 enhances data visibility, reporting, and change tracking. By supporting container usage reporting by leveraging IBM Sub-Capacity Reporting Tool (SCRT) data, IBM Z Software Asset Management 8.2 can provide an easier way to view and consume SCRT data and can make it easier to view which machines and containers are being used. Also, this shows which products are part of which container and then drills back into additional usage data.

These enhancements can enable an IT administrator to see the full spectrum of hardware and software data usage. By supporting containers, IBM Z Software Asset Management can make it easier for contract managers to support tailored fit pricing efforts, showing a full view of consumption based on product usage and product suite usage.

### IBM Z ChatOps 1.1.2 enables chat-based operations and enhances collaboration

ChatOps is a collaboration model that connects people, processes, tools, and automation in a seamless and transparent way through a chat platform, such as Slack, Microsoft<sup>™</sup> Teams, or Mattermost, and extensive use of specialized chatbots.

The chat platform enables team members to work together in the same virtual location and see and share the same information. Chatbots enable chat users to access tools from within a chat window instead of requiring users to open dedicated application windows or consoles.

### IBM Z ChatOps elevates collaboration techniques and processes

IBM Z ChatOps 1.1.2 provides ChatOps capabilities for IBM Z clients by providing a chatbot that gives users in the chat tool access to information from IBM Z systems management tools such as IBM Z System Automation, IBM Z NetView, IBM Z Workload Scheduler, and OMEGAMON.

Additionally, IBM Z ChatOps can be used to notify technical team members that are using the chat tool about IBM Z events. For example, situation events from OMEGAMON, anomalies detected by IBM Z Operations Analytics, or events from IBM Z Workload Scheduler or IBM Z System Automation can be displayed in the chat environment by integrating with IBM Z ChatOps.

IBM Z ChatOps integrates with Service Management Unite to enable chat users to drill down from events or chatbot output to web-based dashboards with more information and can give users a more effective way to easily share IBM Z systems data through the use of the chat platform.

Downloads, software requirements, hardware requirements, and details of new capabilities for IBM Z ChatOps are provided in the Customer access Portal website.

### **IBM Service Management Unite 1.1.9**

Although all the components in the IBM Z Service Management Suite are purposebuilt to improve management of your IBM Z monitoring and automation processes, one of the more powerful components in this suite, Service Management Unite, plays a key role in simplifying the operation of complex workloads by providing visibility and control for your IBM Z centric workloads.

Service Management Unite is a customizable management dashboard that brings mainframe management information and tasks from disparate sources into a single environment. It helps operators triage alerts and take corrective action, including issuing system commands and viewing results, without going to a different console.

Service Management Unite dashboards are populated with data and tasks from OMEGAMON, IBM Z System Automation, IBM Z NetView, IBM Z Workload Scheduler, and Zowe Explorer functionalities, if available in the environment. Operators can quickly and confidently analyze, isolate, and diagnose problems because all relevant data, including important logs, is provided in a single place. Guided problem isolation pages with suggested actions enable operators to restore service quickly. In addition, Service Management Unite provides access to automation functions to start, stop, move, or recycle business applications that are running on z/OS or Linux<sup>(R)</sup> on IBM Z systems and supported distributed platforms, even from mobile devices. System Automation operators and administrators can use graphical views to look at the topology of their automation domains and to view the dependencies between automated applications that are defined in their automation policy.

On top of the large variety of dashboards provided, users can create their own customized dashboards to adapt them to specific needs or integrate their own data.

The Service Management Unite Docker image and corresponding eezdocker.sh script enable administrators to deploy, configure, and upgrade Service Management Unite in a container environment. This includes running the Service Management Unite Docker container in an IBM z/OS Container Extension, which enables Service Management Unite to run as z/OS address space that can be managed by using standard z/OS procedures. More details about z/OS Container Extensions are provided at the IBM Z Content Solutions website.

Downloads, software requirements, hardware requirements, and details of new capabilities for Service Management Unite are provided in the Customer access Portal website.

#### IBM Z OMEGAMON Monitor for z/OS 5.6

IBM Z OMEGAMON Monitor for z/OS provides detailed monitoring and problem management for IBM Z systems. By combining metrics data that is collected from components such as IBM z/OS Resource Measurement Facility, IBM Workload Manager, IBM Coupling Facility, IBM Cross-System Coupling Facility, global enqueue, shared DASD, and USS workloads, users can monitor and manage these key subsystems. It provides the visibility, usability, and performance that are required to make managing these environments and components more efficient and effective, potentially preventing or reducing downtime resulting from outages.

As new hardware is introduced, it is critical to monitor the enhancements for observability and performance management, and to alert your support teams if service level thresholds are exceeded. IBM Z OMEGAMON Monitor for z/OS has been enhanced to support the new IBM z16<sup>™</sup> hardware with additional metrics for System Recovery Boost, and Crypto Express8S card status and performance, allowing users to take advantage of these new features with confidence that observability is provided by IBM monitoring tools.

#### IBM Z OMEGAMON Network Monitor 5.6

IBM Z OMEGAMON Network Monitor collects network performance management data across IBM Z mainframe systems. It can proactively monitor and manage network performance of IBM Z mainframe systems resources and mission-critical applications.

It senses poor or unstable network connections that hamper application performance and helps to pinpoint root causes to ensure high availability of services and improve user productivity. It enables the management of multiple IBM Z mainframe systems and network stacks from a single interface to improve user productivity and operational scalability.

## IBM Z OMEGAMON Integration Monitor 5.6

IBM Z OMEGAMON Integration Monitor displays performance information from a variety of sources, including OMEGAMON monitors and third-party software, in a single location. It delivers near real-time and historical information and operating system and key subsystem performance. You can use a single-screen view of all situation alerts to rapidly identify the root cause of complex issues involving multiple subsystems.

IBM Z OMEGAMON Integration Monitor 5.6 supports hybrid cloud observability with OMEGAMON Data Provider streaming metrics for z/OS, CICS, Db2, JVM, and IMS to popular open analytics platforms such as Elastic, Splunk, Prometheus, Grafana, and Apache Kafka, along with corresponding starter Elastic dashboards. These IBM Z OMEGAMON Integration Monitor 5.6 capabilities are also available in IBM Z Monitoring Suite 1.3 through continuous delivery releases.

#### **IBM Z OMEGAMON for CICS 5.6**

OMEGAMON for CICS is a performance monitor that provides subject matter experts, such as systems programmers, with the capability to manage CICS Transaction Server and CICS Transaction Gateway resources and workloads. It integrates with other members of the OMEGAMON portfolio to provide a powerful cross-subsystem problem determination toolset and is designed to help subject matter experts manage and monitor their systems with greater ease.

#### New enhancements include:

- Program Tracking adds a powerful new diagnostic to IBM Z OMEGAMON for CICS.
   With Program Tracking, you can see a list of all CICS programs used by a task, with CPU time, elapsed time, and other statistics for each program.
- Resource limiting resolution for CPU has been increased to allow transaction limits to be set in millisecond increments. This allows actions to be taken much sooner to prevent tasks from impacting the region.
- CICS Transaction Gateway Memory statistics are now available in OMEGAMON.
  This allows users to monitor their CICS T/G Daemon for problems related to
  memory usage.
- Support for IBM CICS Transaction Server for z/OS 6.1

#### IBM OMEGAMON for IMS on z/OS 5.5

OMEGAMON for IMS on z/OS is a performance monitor that provides subject matter specialists, such as systems programmers, with the capability to manage IMS resources and workloads through integrated workspaces. These workspaces provide alerts to problem conditions, aid the user to determine the root-cause issue, and help in taking corrective action to minimize any costly impact to business-critical applications.

#### IBM OMEGAMON for Messaging on z/OS 7.5

OMEGAMON for Messaging on z/OS is a performance monitor that provides subject matter experts, such as systems programmers, with the capability to manage resources, MQ objects, and workloads for IBM MQ on z/OS, IBM Integration Bus for z/OS, and IBM App Connect Enterprise on IBM z/OS Container Extensions (zCX). This product integrates with other offerings in the OMEGAMON portfolio to provide a powerful cross-subsystem problem determination toolset and is designed to help subject matter experts manage and monitor their systems with greater ease.

## **IBM Z OMEGAMON for JVM 5.5**

IBM Z OMEGAMON for JVM monitors the health of client-vital JVMs that run on z/OS operating systems. It enables clients to see operating and environmental characteristics about their JVMs, and key performance metrics such as garbage collection rates, that help manage the performance and availability of JVMs.

Additional functionality provides more visibility into the performance of requester and provider APIs that are created with IBM z/OS Connect Enterprise Edition, such as the capability to determine problems as deep as the subsystem program (for example, CICS, Db2, and so on) and logical partition (LPAR), capturing early failures and APIs inflight and providing details of completed Java<sup>TM</sup> batch programs. Automatic JVM detection can help you to quickly get started, discover your JVMs, and ensure that the JVMs are at the correct patch level, healthy, and performing well. OMEGAMON for JVM is designed to enable you to quickly detect problems and act in real-time to increase the speed of problem resolution.

Continuous delivery program temporary fixes (PTFs) provide:

- IBM Semeru Java V11 support on z/OS
- A new facility to selectively extract data from archives in a variety of formats suitable for ingestion into analytic insight reporting tools for z/OS Connect EE data

## IBM OMEGAMON for Storage on z/OS 5.5

OMEGAMON for Storage on z/OS provides storage management and corrective action capability to prevent storage-related outages. Administrators can be more efficient with intelligent alerts, targeted reporting, and linkages to related tools by using common interfaces and processes. OMEGAMON for Storage on z/OS covers key hardware and software subsystems to maintain a healthy, efficient z/OS storage environment. Automated actions are based on rich storage monitoring capabilities for z/OS I/O subsystem performance, space management, and storage availability to help ensure optimal performance. Recently added capabilities use Zowe technology to deliver an enhanced storage administrator experience for real-time data set management.

## IBM OMEGAMON for Db2 Performance Expert on z/OS 5.5

OMEGAMON for Db2 Performance Expert on z/OS 5.5 enables users to assess the efficiency of Db2 and optimize its performance, combining sophisticated response time tracking, reporting, monitoring, and buffer pool analysis features, as well as expert database analysis functions. New enhancements to support Db2 13 include:

- Monitoring and reporting on Db2 SQL Data Insights
- · Group Buffer Pool Residency Time feature in both BATCH reporting and real-time monitoring to provide IBM z16 platform support
- Longest Lock/Latch Waiter (new IFCID 3 data section QLLL) feature supported in BATCH reporting and E3270 Thread History
- Application Timeout and Deadlock Control improvements, including new IFCID 437, supported in BATCH reporting and real-time monitoring
- Gradual DBAT Contraction feature supported in BATCH reporting and real-time monitoring
- Plan authorization cache-related changes supported in BATCH reporting and realtime monitoring
- New Index Split IFICD 396 supported in BATCH reporting
- Various ZPARM additions and changes added to BATCH reporting and real-time monitorina

## IBM Tivoli Composite Application Manager for Application Diagnostics on z/ OS 7.1.0

Tivoli Composite Application Manager for Application Diagnostics on z/OS 7.1 provides deep diagnostic capabilities for JEE applications in three areas: operational monitoring, transaction analysis, and memory analysis. Each of these areas can provide a sharper focus on application performance problems.

Operational monitoring is valuable to IT operations and subject matter experts. such as web and application administrators and developers, in determining the health of an application and the environment in which it runs, in performing initial troubleshooting, and in some cases, diagnosis.

Tivoli Composite Application Manager for Application Diagnostics on z/OS features memory analysis capabilities that facilitate the detection and location of memory leaks by using various methods, including:

Memory trend graphing metric, detect memory leaks, garbage collection, and lock contention conditions

- Heap analysis to help pinpoint leaking classes to assist developers with fixing defective code by capturing the line number of code responsible for suspected leaking classes
- Capturing the line number of code responsible for suspected leaking classes

### IBM Z Workload Scheduler 10.1

IBM Z Workload Scheduler is a workload automation solution that enables organizations to automate, plan, and control the processing of complex systems' workloads. It enables you to manage workflows from a single point of control across multiple platforms and business applications. Leveraging modern technologies, it adjusts real-time workflow execution, based on the users' business needs.

IBM Z Workload Scheduler enables the integration of data transfer operations in the Workload Automation workflows, provides embedded AI capabilities to detect anomalies and predict SLA compliance, provides easy integration in DevOps workflows through REST API and Zowe CLI, and also integrates with IBM Z ChatOps and IBM Service Management Unite.

## IBM Z NetView for Continuous Availability 6.4

IBM Z NetView for Continuous Availability 6.4 is a major component in the GDPS continuous availability solution. NetView for Continuous Availability 6.4 provides monitoring and automation capabilities, helping to create an automated, crossplatform disaster recovery solution at virtually any distance between a primary site and a recovery site. These capabilities include:

- Monitoring of the IBM Multi-Site Workload Lifeline product
- Monitoring of replication products and other managed elements
- Automation of events and processes to reduce recovery time and increase efficiency in the use of system resources

### Value Unit-based pricing

Value Unit pricing for eligible IBM Z IBM International Program License Agreement (IPLA) programs enables a lower cost of incremental growth and enterprise aggregation. Each IBM 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 IBM 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 IBM Z IPLA program that you have acquired is referred to as entitled license capacity. If you wish to grow your entitled license capacity for an IBM Z IPLA program, the calculation to determine additional needed Value Units is based upon the number of Value Units already acquired.

For each IBM 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, see the IBM Z software pricing tools website. Select "Download" under VU Converter to obtain the converter tool.

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

To determine the required license capacity for the IBM Z IPLA program you selected, see the Terms and conditions section.

## Statement of general direction

IBM intends to update IBM Z Service Management Suite, IBM Z Monitoring Suite, and the IBM OMEGAMON family to support z/OS native container technology in a future release.

## Notice of planned withdrawal

IBM Z NetView 6.4 is the last release that supports the following functions:

- NetView Management Console (NMC)
- NetView Discovery Library Adapter (DLA)
- NetView-NetView (NNT) task support

Statements by IBM regarding its plans, directions, and intent are subject to change or withdrawal without notice at the sole discretion of IBM. Information regarding potential future products is intended to outline general product direction and 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 IBM products remain at the sole discretion of IBM.

## **Availability of national languages**

Not applicable.

Translation information, if available, can be found at the Translation Reports website.

# **Program number**

Program number	VRM	Program name
5698-014	2.3.0	IBM Z Service Management Suite
5698-B66	1.3.0	IBM Z Monitoring Suite
5698-SA1	1.5.0	IBM Z Service Automation Suite
5698-BMP	6.4.0	IBM Z NetView for Continuous Availability
5698-T07	5.6.0	IBM Z OMEGAMON for CICS
Program PID number		Subscription and Support PID number

Program PID number	Subscription and Support PID number
5698-SA1	5698-SA2
5698-BMP	5698-BMQ
5698-T07	5608-S74

## **Offering Information**

Product information is available on the IBM Offering Information website.

### **Publications**

The following documentation links will be available at general availability at:

- IBM Z Service Management Suite 2.3
- IBM Z Monitoring Suite 1.3
- IBM Z Service Automation Suite 1.5
- IBM Service Management Unite 1.1.9
- IBM Z System Automation 4.3
- IBM Z ChatOps 1.1.2
- IBM Z OMEGAMON for CICS 5.6

The following publications will be available for ordering on the planned availability date. To order, access the publications in IBM Documentation or contact your IBM representative.

## IBM Z Service Management Suite for z/OS 2.3

Title	Publication number
IBM Z Service Management Suite for z/OS Program Directory	GI13-5238
IBM Z Service Management Suite for z/OS License Information CD	LC27-9721

## IBM Z Monitoring Suite 1.3

Title	Publication number
IBM Z Monitoring Suite Program Directory	GI13-5209
IBM Z Monitoring Suite License Information CD	LCD7-9705
IBM RMF Operational Analytics	LCD7-7561
IBM Z OMEGAMON Data Provider V1.1.0 Installation and User Guide	GC27-9724
IBM Z OMEGAMON Data Provider - Starter Dashboards	LCD7-7565

## **IBM Z Service Automation Suite 1.5**

Title	Publication number
IBM Z Service Automation Suite Program Directory	GI13-4913
IBM Z Service Automation Suite License Information CD	LC27-9534

# IBM Z System Automation 4.3

Title	Publication number
IBM System Automation for z/OS 4.3.0 Program Directory	GI13-4184

Title	Publication number
IBM System Automation for z/OS 4.3.0 License Information CD	LC27-8746

## IBM Z NetView 6.4

Title	Publication number
IBM Z NetView - Program Directory	GI11-9444
IBM Z NetView Enterprise Management Agent - Program Directory	GI11-9446

# IBM Z Software Asset Management 8.2

Title	Publication number
IBM Z Software Asset Management - Program Directory	GI13-5230
IBM Z Software Asset Management License Information	GI13-5231
IBM Z Software Asset Management - IPLA License Information CD	LC27-9718

# IBM Service Management Unite 1.1.9

Title	Publication number
IBM Service Management Unite Enterprise Edition on xLinux CD	LCD7-7518
IBM Service Management Unite Enterprise Edition on zLinux CD	LCD7-7519

### **IBM Z OMEGAMON for CICS 5.6**

Title	Publication number
IBM Z OMEGAMON for CICS 5.6.0 - Program Directory	GI13-2212
IBM Z OMEGAMON for CICS 5.6.0 - License Information CD	LC27-4896
IBM Z OMEGAMON for CICS 5.6.0 - License Information	GI13-2213

# IBM OMEGAMON for IMS on z/OS 5.5

Title	Publication number
IBM OMEGAMON for IMS on z/OS 5.5.0 - Program Directory	GI13-2251
IBM OMEGAMON for IMS on z/OS 5.5.0 - License Information CD	LC27-4934
IBM OMEGAMON for IMS on z/OS 5.5.0 - License Information	GI13-2252

# IBM OMEGAMON for Messaging on z/OS 7.5

Title	Publication number	
IBM OMEGAMON for Messaging on z/OS 7.5.0 - Program Directory	GI13-2249	
IBM OMEGAMON for Messaging on z/OS 7.5.0 - License Information CD	LC27-4900	
IBM OMEGAMON for Messaging on z/OS 7.5.0 - License Information	GI13-2250	

## **IBM Z OMEGAMON for JVM 5.5**

Title	Publication number
IBM Z OMEGAMON for JVM 5.5.0 - Program Directory	GI13-4174
IBM Z OMEGAMON for JVM 5.5.0 - License Information CD	LCD7-8741

Title	Publication number	
IBM Z OMEGAMON for JVM 5.5.0 - License Information	GI13-4175	

# IBM OMEGAMON for Storage on z/OS 5.5

Title	Publication number
IBM OMEGAMON for Storage on z/OS 5.5.0 - Program Directory	GI13-2305
IBM OMEGAMON for Storage on z/OS 5.5.0 - License Information CD	LC27-4866
IBM OMEGAMON for Storage on z/OS 5.5.0 - License Information	GI13-2306

# IBM OMEGAMON for Db2 Performance Expert on z/OS 5.5

Title	Publication number
IBM OMEGAMON for Db2 Performance Expert on z/OS 5.5 - Program Directory	GI13-5529
IBM OMEGAMON for Db2 Performance Expert on z/OS 5.5 - License Information	LC28-2759

## IBM Tivoli Composite Application Manager for Application Diagnostics on z/ OS 7.1

Title	Publication number
IBM Tivoli Composite Application Manager for Application Diagnostics - Program Directory	GI11-9334
IBM Tivoli Composite Application Manager for Application Diagnostics Common Services - Program Directory	GI11-9335
IBM Tivoli Composite Application Manager for Application Diagnostics, Tivoli Enterprise Monitoring Agent - Program Directory	GI11-9336
IBM Tivoli Composite Application Manager for Application Diagnostics - License Information	GI11-9337

### IBM Z Workload Scheduler 10.1

Publication number
GI13-5605
GI13-5606
GI13-5607
GI13-5608
GI13-5609
LC27-5704
GI13-5610

# IBM Z NetView for Continuous Availability 6.4

Title	Publication number
IBM Z NetView for Continuous Availability 6.4.0 Program Directory	GI13-2297
IBM Z NetView for Continuous Availability 6.4.0 License Information CD	LCD7-4903

#### **IBM Systems Lab Services**

Systems Lab Services offers infrastructure services to help build hybrid cloud and enterprise IT solutions. From servers to storage systems and software, Systems Lab Services can help deploy the building blocks of a next-generation IT infrastructure to empower a client's business. Systems Lab Services consultants can perform infrastructure services for clients online or onsite, offering deep technical expertise, valuable tools, and successful methodologies. Systems Lab Services is designed to help clients solve business challenges, gain new skills, and apply best practices.

Systems Lab Services offers a wide range of infrastructure services for IBM Power<sup>(R)</sup> servers, IBM Storage systems, IBM Z, and IBM LinuxONE. Systems Lab Services has a global presence and can deploy experienced consultants online or onsite around the world.

For assistance, contact Systems Lab Services at ibmsls@us.ibm.com.

To learn more, see the IBM Systems Lab Services website.

## IBM Consulting<sup>TM</sup>

As transformation continues across every industry, businesses need a single partner to map their enterprise-wide business strategy and technology infrastructure. IBM Consulting is the business partner to help accelerate change across an organization. IBM specialists can help businesses succeed through finding collaborative ways of working that forge connections across people, technologies, and partner ecosystems. IBM Consulting brings together the business expertise and an ecosystem of technologies that help solve some of the biggest problems faced by organizations. With methods that get results faster, an integrated approach that is grounded in an open and flexible hybrid cloud architecture, and incorporating technology from IBM Research<sup>(R)</sup> and IBM Watson<sup>(R)</sup> AI, IBM Consulting enables businesses to lead change with confidence and deliver continuous improvement across a business and its bottom line.

For additional information, see the IBM Consulting website.

## IBM Technology Support Services (TSS)

Get preventive maintenance, onsite and remote support, and gain actionable insights into critical business applications and IT systems. Speed developer innovation with support for over 240 open-source packages. Leverage powerful IBM analytics and AI-enabled tools to enable client teams to manage IT problems before they become emergencies.

TSS offers extensive IT maintenance and support services that cover more than one niche of a client's environment. TSS covers products from IBM and OEMs, including servers, storage, network, appliances, and software, to help clients ensure high availability across their data center and hybrid cloud environment.

For details on available services, see the Technology support for hybrid cloud environments website.

## **IBM Expert Labs**

Expert Labs can help clients accelerate their projects and optimize value by leveraging their deep technical skills and knowledge. With more than 20 years of industry experience, these specialists know how to overcome the biggest challenges to deliver business results that can have an immediate impact.

Expert Labs' deep alignment with IBM product development allows for a strategic advantage as they are often the first in line to get access to new products, features, and early visibility into roadmaps. This connection with the development enables

them to deliver First of a Kind implementations to address unique needs or expand a client's business with a flexible approach that works best for their organization.

For additional information, see the IBM Expert Labs website.

## IBM Security<sup>(R)</sup> Expert Labs

With extensive consultative expertise on IBM Security software solutions, Security Expert Labs helps clients and partners modernize the security of their applications, data, and workforce. With an extensive portfolio of consulting and learning services, Expert Labs provides project-based and premier support service subscriptions.

These services can help clients deploy and integrate IBM Security software, extend their team resources, and help guide and accelerate successful hybrid cloud solutions, including critical strategies such as zero trust. Remote and on-premises software deployment assistance is available for IBM Cloud Pak<sup>(R)</sup> for Security, IBM Security QRadar<sup>(R)</sup>/QRoC, IBM Security SOAR/Resilient<sup>(R)</sup>, IBM i2<sup>(R)</sup>, IBM Security Verify, IBM Security Guardium<sup>(R)</sup>, and IBM Security MaaS360<sup>(R)</sup>.

For more information, contact Security Expert Labs at sel@us.ibm.com.

For additional information, see the IBM Security Expert Labs website.

### **Technical information**

#### Specified operating environment

### Hardware requirements

#### IBM Z System Automation 4.3

IBM Z System Automation 4.3 runs in a virtual storage environment on any IBM or non-IBM system configuration with sufficient storage to support the IBM z/OS operating system. The Processor Operations component supports IBM Z hardware from IBM z10, or higher.

IBM Z System Automation 4.3 runs on z/OS V2.3, or later, and requires IBM Z NetView 6.3, or later.

#### IBM Z NetView 6.4

IBM Z NetView 6.4 runs in a virtual storage environment on any IBM system configuration with sufficient storage that supports IBM z/OS V2.3, or later.

IBM Z NetView Enterprise Management Agent

Any hardware that supports one of the following operating systems:

z/OS V2.3, or later

NetView Management Console Topology Server

Any hardware that supports one of the following operating systems:

- IBM AIX<sup>(R)</sup> 7.1 (IBM Power Systems), or later
- Red Hat<sup>(R)</sup> Enterprise Linux<sup>(R)</sup> 6 (IBM Z)
- Red Hat Enterprise Linux 7 (IBM Z)
- Red Hat Enterprise Linux 8 (IBM Z)
- SUSE Linux Enterprise Server 12 (IBM Z)
- SUSE Linux Enterprise Server 15 (IBM Z)
- Microsoft<sup>™</sup> Windows<sup>™</sup> Server 2012 R2
- Microsoft Windows Server 2016

- Microsoft Windows Server 2019
- Microsoft Windows Server 2022

Installation footprint: 100 MB of additional fixed disk space.

#### Topology console

Any hardware that supports one of the following operating systems with TCP/IP installed:

- Red Hat Enterprise Linux Desktop 6 (x86-32, x86-64)
- Red Hat Enterprise Linux Desktop 7 (x86-32, x86-64)
- Red Hat Enterprise Linux Desktop 8 (x86-32, x86-64)
- Red Hat Enterprise Linux Server 6 (x86-64)
- Red Hat Enterprise Linux Server 7 (x86-64)
- Red Hat Enterprise Linux Server 8 (x86-64)
- SUSE Linux Enterprise Desktop 15 (x86-64)
- SUSE Linux Enterprise Server 15 (x86-64)
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Microsoft Windows Server 2022
- Microsoft Windows 10
- Microsoft Windows 11

Installation footprint: 300 MB of additional fixed disk space.

### **IBM Z Software Asset Management 8.2**

Minimum hardware requirements needed for installation:

An IBM z/Architecture<sup>(R)</sup> machine capable of running IBM z/OS V2.3, or later

#### IBM Z ChatOps 1.1.2

To successfully install IBM Z ChatOps, clients must meet the hardware requirements, considering processor number, memory, disk space, port number, and internet access in the IBM Z ChatOps 1.1.2 hardware requirements website.

## IBM Service Management Unite 1.1.9

To successfully install IBM Service Management Unite, clients must meet the hardware requirements, considering processor number, memory, disk space, and TCP/IP connectivity in the IBM Service Management Unite 1.1.9 hardware requirements website.

## IBM OMEGAMON product agents

The minimum required hardware and prerequisites for IBM OMEGAMON agents are the following:

- IBM Z OMEGAMON Monitor for z/OS 5.6
- IBM Z OMEGAMON Network Monitor 5.6
- IBM Z OMEGAMON Integration Monitor 5.6
- IBM Z OMEGAMON for CICS 5.6
- IBM OMEGAMON for IMS on z/OS 5.5
- IBM OMEGAMON for Messaging on z/OS 7.5
- IBM Z OMEGAMON for JVM 5.5

- IBM OMEGAMON for Storage on z/OS 5.5
- IBM OMEGAMON for Db2 Performance Expert on z/OS 5.5
- IBM Tivoli Composite Application Manager for Application Diagnostics on z/OS 7.1.0

Any IBM Z processor that can run z/OS V2.3 (5650-ZOS), or later.

- Minimum of 10 GB of free disk space for a classic installation
- Minimum of 20 GB of free disk space for each Docker-based installation

#### IBM Z Workload Scheduler 10.1

Z Workload Scheduler 10.1 and its components run on the hardware platforms that support the operating systems listed in the Memo to Users document. This information is available in IBM Documentation website.

## IBM Z NetView for Continuous Availability 6.4

Z NetView for Continuous Availability runs in a virtual storage environment on any IBM system configuration with sufficient storage that supports z/OS V2.3, or later.

### Software requirements

#### IBM Z System Automation 4.3

IBM Z System Automation 4.3 runs as an application on the z/OS operating system. Programming requirements for all functions include the following:

- z/OS V2.3, or later
- IBM Z NetView 6.3, or later
- Other optional functional programming requirements

For additional information, see the Program Directory or Planning and Installation Manual.

#### IBM Z NetView 6.4

This section defines the minimum programming requirements for IBM Z NetView 6.4 and its operating environments. Specific functions of IBM Z NetView might require products, higher levels, or later versions of the products listed.

IBM Z NetView runs as an application on the z/OS operating system. IBM Z NetView support is provided at the listed levels or subsequent levels that are compatible with later versions, unless otherwise stated. Compatibility with later versions means that functions that are provided by the earlier releases are still supported.

Programming requirements for all functions include:

- z/OS V2.3, or later
- NetView-to-NetView communication: In a multiple-domain network or across multiple SNA networks, the IBM Z NetView program can communicate with another Tivoli NetView program, regardless of the operating system. IBM Z NetView 6.4.0 can communicate with the following at the listed systems level of capabilities:
  - IBM Tivoli NetView for OS/390<sup>(R)</sup> 1.4
  - IBM Tivoli NetView for z/OS 6.2
  - IBM Tivoli NetView for z/OS 6.2.1
  - IBM Z NetView 6.3.0

## **Function compatibility**

Except for previously withdrawn functions, the functions of the following versions and releases are compatible with IBM Z NetView 6.4:

- Tivoli NetView for OS/390 1.4
- Tivoli NetView for z/OS 6.2
- Tivoli NetView for z/OS 6.2.1
- IBM Z NetView 6.3.0

## System definition compatibility

To facilitate migration from a previous release, IBM Z NetView host code runs with the NetView Management Console (NMC) Topology Server and Console from the following earlier releases:

- Tivoli NetView for z/OS 6.2
- Tivoli NetView for z/OS 6.2.1
- IBM Z NetView 6.3.0

Note: See the IBM Z NetView 6.4 Installation: Migration Guide for details.

For equivalent, non-system-dependent functions, IBM Z NetView operates with the REXX procedures of Tivoli NetView for OS/390 1.4.

User applications, written for these NetView releases in accordance with NetView customization publications and using NetView customization services, are source compatible. A reassembly or recompile by using IBM Z NetView macro libraries is required.

If user written customization code is being migrated from one operating system release to another, user written code that contains system-dependent functions might not run and might require conversion.

### **Enhanced function support**

The following IBM Z NetView functions and features require the specified program levels or subsequent upward-compatible levels unless stated otherwise:

- z/OS Encryption Readiness Technology (zERT): z/OS V2.3, or later
  - zERT policy-based enforcement (zERT enforcement): z/OS V2.5, or later
- IBM Z NetView Enterprise Management Agent:
  - IBM Tivoli Monitoring 6.3.0 Fix Pack 7, or later, which bundles IBM Db2 11.5.7 Standard Edition Server. For information about software requirements for IBM Tivoli Monitoring 6.3.0, see the IBM Tivoli Monitoring: Installation and Setup Guide (SC22-5445).
  - Optional: IBM OMEGAMON for Networks on z/OS 5.5.0, IBM Z OMEGAMON for CICS, 5.6.0, IBM OMEGAMON on z/OS 5.5.0, IBM OMEGAMON for IMS on z/OS 5.5.0, IBM Z OMEGAMON for JVM 5.5.0, IBM OMEGAMON for Db2 Performance Expert on z/OS 5.5.0, and IBM OMEGAMON for Messaging on z/ OS 7.5.0.
  - Or, IBM Z OMEGAMON Monitor for z/OS 5.6 and IBM Z OMEGAMON Network Monitor 5.6, included only in IBM Z Service Management Suite V2.x and IBM Z Monitoring Suite V1.x.
- Mixed-case passwords: z/OS 1.12 Security Server (RACF<sup>(R)</sup>), or later.
- IBM Z NetView REST Server component: z/OS V2.3, or later, with Java™ 8, or
- Optional: IBM Zowe<sup>TM</sup> Distribution V1
  - IBM Zowe Distribution is a supporting program for Zowe use cases related to NetView extensions

### **NetView Management Console**

#### Topology server

One of the following is required.

- AIX 7.1 (Power Systems), or later, with one of the following:
  - XL C/C++ Runtime for AIX applications:
    - -- xIC.rte 8.0.0.0, or later
  - XL C/C++ Runtime for AIX 7.1 applications:
    - -- xlC.aix50.rte 8.0.0.0, or later

Note: xIC.rte and xIC.aix50.rte are included on the IBM Z NetView 6.4 product DVD.

- Red Hat Enterprise Linux 6 (IBM Z)
- Red Hat Enterprise Linux 7 (IBM Z)
- Red Hat Enterprise Linux 8 (IBM Z)
- SUSE Linux Enterprise Server 12 (IBM Z)
- SUSE Linux Enterprise Server 15 (IBM Z)
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Microsoft Windows Server 2022

### Topology console

One of the following is required:

- Red Hat Enterprise Linux Desktop 6 (x86-32, x86-64)
- Red Hat Enterprise Linux Desktop 7 (x86-32, x86-64)
- Red Hat Enterprise Linux Desktop 8 (x86-32, x86-64)
- Red Hat Enterprise Linux Server 6 (x86-64)
- Red Hat Enterprise Linux Server 7 (x86-64)
- Red Hat Enterprise Linux Server 8 (x86-64)
- SUSE Linux Enterprise Desktop 15 (x86-64)
- SUSE Linux Enterprise Server 15 (x86-64)
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Microsoft Windows Server 2022
- Microsoft Windows 10
- Microsoft Windows 11

Server communications with IBM Z NetView using LU 6.2

For LU 6.2 connections, one of the following is required:

- IBM Communications Server for AIX 6.4 (5765-E51)
- IBM Communications Server for Windows 6.4 (5639-F25), or later

NMC Server Audit Log: To use a web browser to view the audit log requires a browser that supports eXtensible Stylesheet Language (XSL). Common browsers that support XSL include:

• Mozilla Firefox 60 (ESR), or later

Event/Automation Service to Tivoli Netcool®/OMNIbus

EIF Probe with Tivoli Netcool/OMNIbus 8.1 (5724-S44)

System Authorization Facility (SAF) security checking

- z/OS Security Server (5694-A01) or an equivalent SAF product is required for SAF security checking of each of the following functions:
  - Resource Object Data Manager connections
  - NetView operator passwords
  - RMTCMD through the RMTOPS Class
  - NetView command authorization
  - NetView span of control access
  - NetView operator logon information
  - Graphical view security
  - List RACF profile for NetView operators

#### IBM Z Workload Scheduler 10.1

The detailed list of supported operating systems, software requirements, and hardware requirements for IBM Z Workload Scheduler 10.1 and its components (Dynamic Workload Console, IBM Z Connector, and IBM Z Workload Scheduler Agent) are listed in the following support documents:

- IBM Z Workload Scheduler and IBM Workload Scheduler
- Dynamic Workload Console

## IBM Z Software Asset Management 8.2

Following are the software requirements for running IBM Z Software Asset Management:

- IBM z/OS V2.3, or later
  - Db2 11.1 or Db2 12.1 (only if you choose to use IBM Db2 as the IBM Z Software Asset Management database)
  - SQLite version 3.27.2 (embedded within IBM Z Software Asset Management)
- Language environment for z/OS
  - Firefox with JavaScript and cookies enabled
  - Chrome with JavaScript and cookies enabled
  - Edge with JavaScript and cookies enabled
  - Internet Explorer 11 with JavaScript and cookies enabled (not recommended as out of support)

#### IBM Z ChatOps 1.1.2

To successfully install Z ChatOps, you must meet the software requirements considering operating system, runtime, database, chat platform, and data source in the IBM Z ChatOps 1.1.2 software requirements website.

# IBM Service Management Unite 1.1.9

Prerequisite software must be installed in your environment before you install and configure IBM Service Management Unite. Prerequisite checks are run automatically at various points in the installation process in the IBM Service Management Unite 1.1.9 software requirements website.

#### IBM OMEGAMON product agents

The minimum software prerequisites for IBM OMEGAMON agents are:

z/OS V2.3 (5650-ZOS), or later

IBM Tivoli Monitoring for z/OS 6.3.0 Fix Pack 7, or later

Review the product hardware and software prerequisites for the latest minimum requirements. See the Program Directory or Planning and Installation Manual.

#### IBM Z NetView for Continuous Availability 6.4

IBM Z NetView for Continuous Availability runs as an application on the z/OS operating system.

Programming requirements for all functions:

- z/OS V2.3, or later
- Z NetView 6.4

### IBM Support

IBM Support is your gateway to technical support tools and resources that are designed to help you save time and simplify support. IBM Support can help you find answers to questions, download fixes, troubleshoot, submit and track problem cases, and build skills. Learn and stay informed about the transformation of IBM Support, including new tools, new processes, and new capabilities, by going to the IBM Support Insider.

## Additional IBM support

## **IBM Client Engineering for Systems**

Client Engineering for Systems is a framework for accelerating digital transformation. It helps you generate innovative ideas and equips you with the practices, technologies, and expertise to turn those ideas into business value in weeks. When you work with Client Engineering for Systems, you bring pain points into focus. You empower your team to take manageable risks, adopt leading technologies, speed up solution development, and measure the value of everything you do. Client Engineering for Systems has experts and services to address a broad array of use cases, including capabilities for business transformation, hybrid cloud, analytics and AI, infrastructure systems, security, and more. Contact Client Engineering for Systems at sysgarage@ibm.com.

#### **Planning information**

### **Packaging**

These offerings are delivered through the internet as an electronic download. There is no physical media.

### **Direct client support**

For technical support or assistance, contact your IBM representative or go to the IBM Support website.

### Security, auditability, and control

The programs in this announcement use the security and auditability features of the operating system software.

The client is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

## **Ordering information**

Consult your IBM representative or IBM Business Partner.

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

Program number Program name		Value Unit exhibit	
5698-014	IBM Z Service Management Suite 2.3.0	VUE007	
5698-B66	IBM Z Monitoring Suite	VUE007	
5698-SA1	IBM Z Service Automation Suite 1.5.0	VUE020	
5698-BMP	IBM Z NetView for Continuous Availability 6.4	VUE007	
5698-T07	IBM Z OMEGAMON for CICS 5.6	VUE007	

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

## 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	+	0.20

### **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 IBM Z IPLA product, the applicable Value Units would be:

Tier	MSUs	Multiplied by Value Units per MSU	Equal 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
	1,500		3 13130

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

#### 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

## Charge metric

The charge metrics for these licensed products can be found in the following License Information documents (available at general availability):

License Information document title	License Information document number
IBM Z Service Management Suite 2.3	L-L-AJUK-CCYCYK
IBM Z Monitoring Suite 1.3	L-LARL-CE2MJA
IBM Z Service Automation Suite 1.5	L-AJUK-CCYCPN
IBM Z NetView for Continuous Availability 6.4	L-TSFX-CD8J7F
IBM Z OMEGAMON for CICS 5.6	L-LARL-C9AVCX
	document title  IBM Z Service Management Suite 2.3  IBM Z Monitoring Suite 1.3  IBM Z Service Automation Suite 1.5  IBM Z NetView for Continuous Availability 6.4  IBM Z OMEGAMON for

Select your language of choice and scroll down to the Charge Metrics section. Follow-on releases, if any, may have updated terms. See the License Information documents website for more information.

### **Basic license**

### On/Off CoD

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

Translation from MSUs to Value Units

	MSUs	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 or greater	0.03

To order, specify the program ID number and the appropriate license or charge option. To suppress shipment of media, select the license-only option in CFSW.

As a convenience, the following information lists previously announced ordering information.

**Program name:** IBM Z Service Management Suite 2.3

**Program PID:** 5698-014

Entitlement identifier	Description	License option/Pricing metric
S018KK9	IBM Z Mgmt Suite	Basic OTC, per Value Unit
		Multi Version Measurement No Charge
		Basic OTC, per MSU-day TUC
Orderable Supply ID	Long Name	Language
S018KKB	IBM Z-Mgmt Ste System Auto.	English US
S018KKC	IBM Z-Mgmt Ste System Auto.	Japanese
S018KKD	IBM Z-Mgmt Ste OMEG Net Mon	English US
S018KKF	IBM Z-Mgmt Ste OMEG Storage	English US
S018KKG	IBM Z-Mgmt Ste OMEG Int Mon	English US
S018KKH	IBM Z-Mgmt Ste NetView	English US

Orderable Supply ID	Long Name	Language
S018KKJ	IBM Z-Mgmt Ste NetView	Japanese
S018KKK	IBM Z-Mgmt Ste IZSAM	English US
S018KKL	IBM Z-Mgmt Ste ITCAM for AD	English US
S018KKM	IBM Z-Mgmt Ste OMEG for IMS	English US
S018KKN	IBM Z-Mgmt Ste OMEG Message	English US
S018KKP	IBM Z-Mgmt Ste OMEG Db2 PE	English US
S018KKR	IBM Z-Mgmt Ste OMEG for JVM	English US
S018KKS	IBM Z-Mgmt Suite	English US
S018KKT	IBM Z-Mgmt Suite	Japanese
S018KKW	IBM Z-Mgmt Ste OMEG for CICS	English US
S018KKX	IBM Z-Mgmt Ste OMEG Mon z/OS	English US

**Program name:** IBM Z Monitoring Suite 1.3

**Program ID:** 5698-B66

Description	License option/Pricing metric
IBM Z Monitoring Suite V1	Multi Version Measurement No Charge Value Units
	On Off Capacity on demand Temporary Use Charge MSU-DAY(s)
	Use-Based License One- Time Charge Value Units
Description	Language
IBM Z Monitoring Suite	Multilingual
IBM Z Mon Ste OMEGAMON z/OS	Multilingual
IBM Z Mon Ste OMEG Net Mon	Multilingual
IBM Z Mon Ste OMEG Integrat	Multilingual
IBM Z Mon Ste OMEG Storage	Multilingual
IBM Z Mon Ste OMEG JVM Mon	Multilingual
IBM Z Mon Ste OMEG Message	Multilingual
IBM Z Mon Ste OMEG for IMS	Multilingual
IBM Z Mon Ste OMEG for CICS	Multilingual
IBM Z Mon Ste OMEG DB2 <sup>(R)</sup> PE	Multilingual
IBM Z Mon Ste ITCAM for AD	Multilingual
	Description  IBM Z Monitoring Suite  IBM Z Monitoring Suite  IBM Z Mon Ste  OMEGAMON z/OS  IBM Z Mon Ste OMEG Net  Mon  IBM Z Mon Ste OMEG  Integrat  IBM Z Mon Ste OMEG  Storage  IBM Z Mon Ste OMEG  Storage  IBM Z Mon Ste OMEG  Storage  IBM Z Mon Ste OMEG  Message  IBM Z Mon Ste OMEG  Message  IBM Z Mon Ste OMEG  Message  IBM Z Mon Ste OMEG  IBM Z Mon Ste OMEG for  IMS  IBM Z Mon Ste OMEG for  IMS  IBM Z Mon Ste OMEG for  IBM Z Mon Ste OMEG  DB2 <sup>(R)</sup> PE  IBM Z Mon Ste ITCAM for

**Program name:** IBM Z Service Automation Suite 1.5.0

**Program PID:** 5698-SA1

Entitlement identifier	Description	License option/Pricing metric
S018F2B	IBM Z Auto Suite V1	Multi Version Measurement No Charge Value Units

Entitlement identifier	Description	License option/Pricing metric
		On Off Capacity on demand Temporary Use Charge MSU-DAY(s)
		Use-Based License One- Time Charge Value Units
Orderable Supply ID	Description	Language
S018F2C	IBM Z Auto Suite Wrkld Sched	Spanish
S018F2G	IBM Z Auto Suite Wrkld Sched	English US
S018F2L	IBM Z Auto Suite Wrkld Sched	German
S018F2M	IBM Z Auto Suite Wrkld Sched	Korean
S018F2N	IBM Z Auto Suite Wrkld Sched	Japanese
S018F2D	IBM Z Auto Suite System Auto	Japanese
S018F2K	IBM Z Auto Suite System Auto	English US
S018F2H	IBM Z Auto Suite NetView	English US
S018F2J	IBM Z Auto Suite NetView	Japanese

**Program name:** IBM Z NetView for Continuous Availability 6.4.0

**Program PID:** 5698-BMP

Entitlement identifier	Description	License option/Pricing metric
S017D1R	IBM Z NetView Cont Avail V6	Basic OTC, per Value Unit
		Multi Version Measurement No Charge
		Basic OTC, per MSU-day TUC
Orderable supply id	Description	Language
S017D1P	IBM Z NetView Cont Avail 6	Multilingual

**Program name:** IBM Z OMEGAMON for CICS 5.6.0

**Program PID:** 5698-T07

Entitlement identifier	Description	License option/Pricing metric
S016ZVN	OMEGAMON for CICS V5	MultiVersion Measurement No Charge Value Units Qty 1
		On Off Cap on demand Temporary Use Charge MSU-DAY(s) Qty 1
		Use-Based License One- Time Charge Value Units Qty 1
Orderable supply id	Description	Language
S016ZVP	OMEGAMON for CICS V5	Multilingual

You choose the delivery method when you order the software. IBM recommends internet delivery. However, if you still require physical media, you can choose DVD.

**Subscription and Support Program ID:** 5698-015

Entitlement identifier	Description	License option/Pricing metric
S018KL0	IBM Z Mgmt Ste S&S	Decline Subscription and Support No Charge Value Units
		Multi-Version Measurement S&S No Charge Value Units
		SW Subscription and Support Monthly Support Charge Value Units
		SW Subscription and Support Registration No Charge Per MSU
Orderable supply ID	Description	Language
S018KL1	IBM Z Mgmt Ste S&S	English US
S018KL2	IBM Z Mgmt Ste S&S	Japanese

# **Subscription and Support Program ID:** 5698-B67

Description	License option/Pricing metric
IBM Z Monitoring Suite S&S	Decline Subscription and Support No Charge Value Units
	Multi-Version Measurement S&S No Charge Value Units
	SW Subscription and Support Monthly Support Charge Value Units
	SW Subscription and Support Registration No Charge Per MSU
Description	Language
IBM Z Monitoring Suite S&S	Multilingual
	IBM Z Monitoring Suite S&S  Description IBM Z Monitoring Suite

# **Subscription and Support Program ID:** 5698-SA2

Entitlement identifier	Description	License option/Pricing metric
S018F21	IBM Z Service Auto Suite S&S	Decline Subscription and Support No Charge Value Units
		Multi-Version Measurement S&S No Charge Value Units
		SW Subscription and Support Monthly Support Charge Value Units
		SW Subscription and Support Registration No Charge Per MSU
Orderable Supply ID	Description	Language
S018F22	IBM Z Service Auto Suite S&S	English US
S018F23	IBM Z Service Auto Suite S&S	Japanese
S018F24	IBM Z Service Auto Suite S&S	Spanish
S018F25	IBM Z Service Auto Suite S&S	German
S018F26	IBM Z Service Auto Suite S&S	Korean

#### **Subscription and Support Program ID:** 5698-BMQ

Entitlement identifier	Description	License option/Pricing metric
S017D1V	IBM Z NetView Cont Avail S&S	Decline Subscription and Support No Charge Value Units
		Multi-Version Measurement S&S No Charge Value Units
		SW Subscription and Support Monthly Support Charge Value Units
		SW Subscription and Support Registration No Charge Per MSU
Orderable supply ID	Description	Language
S017D1T	IBM Z NetView Cont Avail S&S	Multilingual

## **Subscription and Support Program ID:** 5608-S74

	metric
IBM Z OMEGAMON for CICS S&S	Decline Subscription and Support No Charge Value Units
	Multi-Version Measurement S&S No Charge Value Units
	SW Subscription and Support Monthly Support Charge Value Units
	SW Subscription and Support Registration No Charge Per MSU
Description	Language
IBM Z OMEGAMON for CICS S&S	English US
	Description IBM Z OMEGAMON for

### **Subscription and Support**

To receive voice technical support via telephone and future releases and versions at no additional charge, 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 ID referenced above and the appropriate license or charge option.

IBM is also providing Subscription and Support for these programs with a separately purchased offering under the terms of the IBM International Agreement for Acquisition of Software Maintenance. This offering:

- Includes and extends the support services provided in the base support to include technical support by telephone.
- Entitles you to future releases and versions, at no additional charge. Note that you are not entitled to new programs.

When Subscription and Support is ordered, the charges will automatically renew annually unless canceled 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 IBM 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.

## **Customized Offerings**

Product deliverables are shipped only through CBPDO and ServerPac. These customized offerings are offered for internet delivery. For more details on Internet delivery, go to the Help section on the Shopz website.

IBM recommends internet delivery. However, if you still require physical media, you can choose DVD.

Many products can be ordered in ServerPac the month following their availability in CBPDO. z/OS can be ordered through CBPDO and ServerPac on the planned availability date. Many products will also be orderable in a ServerPac without also having to order the z/OS operating system or subsystem.

Shopz and CFSW will determine the eligibility based on product requisite checking. For more details on the ServerPac, go to the Help section on the Shopz website.

Production of software product orders will begin on the planned availability date.

- CBPDO shipments will begin within 3 business days after the planned availability date.
- ServerPac availability and shipments will begin within 3 4 weeks after the planned product availability date 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<sup>(R)</sup> Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

## Licensing

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use.

## **Software Maintenance**

The following agreement applies for Software Subscription and Support (Software Maintenance) and does not require client signatures:

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

These programs are licensed under the IBM International Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide for support with ongoing access to releases and versions of the program. These programs have a one-time license charge for use of the program and an annual renewable charge for the enhanced support that 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.

IBM Technology Support Services - Support Line for IBM Z is an option if you desire added services.

#### **License Information number**

The following License Information documents apply to the offerings in this announcement (available at general availability):

document title	
5698-014 IBM Z Service Management Suite 2.3	L-L-AJUK-CCYCYK
5698-B66 IBM Z Monitoring Suite 1.3	L-LARL-CE2MJA
5698-SA1 IBM Z Service Automation Suite 1.5	L-AJUK-CCYCPN
5698-BMP IBM Z NetView for Continuous Availability 6.4	L-TSFX-CD8J7F
5698-T07 IBM Z OMEGAMON for CICS 5.6	L-LARL-C9AVCX

Follow-on releases, if any, may have updated terms. See the License Information documents website for more information.

## Limited warranty applies

Yes

#### **Limited warranty**

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information about known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, see the IBM Support Guide.

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

## **Program technical support**

## **Enhanced support**

Technical support of a program product version or release will be available for a minimum of five years from the planned availability date, as long as your Software Subscription and Support is in effect.

This technical support allows you to obtain assistance (by telephone or electronic means) from IBM for product-specific, task-oriented questions regarding the installation and operation of the program product. Software Subscription and Support also provides you with access to updates (modifications or fixes), releases, and versions of the program. You will be notified, through an announcement letter, of discontinuance of support with 12 months' notice.

If you require additional technical support from IBM, including an extension of support beyond the discontinuance date, contact your IBM representative or IBM Business Partner. This extension may be available for a fee.

For additional information about the IBM Software Support Lifecycle Policies, see the Standard and enhanced IBM support lifecycle policies website.

## 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**

Yes. During the Software Subscription and Support period, for the unmodified portion of a program, and to the extent problems can be recreated in the specified operating environment, IBM will provide the following:

- Defect correction information, a restriction, or a bypass.
- Program updates: Periodic releases of collections of code corrections, fixes, functional enhancements and new versions and releases to the program and documentation.
- Technical assistance: A reasonable amount of remote assistance by telephone or electronically to address suspected program defects. Technical assistance is available from the IBM support center in the organization's geography.

Additional details regarding Technical Assistance, which includes IBM contact information, are provided in the IBM Support Guide.

Software Subscription and Support does not include assistance for:

- The design and development of applications.
- Your use of programs in other than their specified operating environment.
- Failures caused by products for which IBM is not responsible under the IBM Agreement for Acquisition of Software Maintenance.

Software Subscription and Support is provided only if the program is within its support timeframe as specified in the Software Support Lifecycle policy for the program.

For operating system software, the revised IBM Technology Support Services - Support Line for IBM Z offering provides usage and how-to support for those operating systems and associated products that are not available with the Software Subscription and Support (Software Maintenance) offering.

This can 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, see the Supported Product List website.

## IBM Technology Support Services - Support Line for IBM Z

Yes

## Variable charges apply

#### **Educational allowance available**

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

#### **Multi-Version Measurement**

Multi-Version Measurement (MVM) replaces the previously announced Migration Grace Period time limit of six months and allows unlimited time for clients to run more than one eligible version of a software program. Clients may run multiple versions of a program simultaneously for an unlimited duration during a program version upgrade. Clients may also choose to run multiple versions of a program simultaneously for an unlimited duration in a production environment. MVM does not extend support dates for programs withdrawn from service.

For a list of eligible programs, see the IPLA Execution-Based web page.

### Sub-capacity terms and conditions

For each IBM 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 IBM Z 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 about the Value Unit Exhibit for the IBM Z IPLA program you selected, see the Ordering information section.

Program number	Program name	Terms
5698-014	IBM Z Service Management Suite 2.3	z/OS-based
5698-B66	IBM Z Monitoring Suite 1.3	z/OS-based
5698-SA1	IBM Z Service Automation Suite 1.5	Execution-based
5698-BMP	IBM Z NetView for Continuous Availability	Execution-based
5698-T07	IBM Z OMEGAMON for CICS	Reference-based

#### 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 an IBM Z IPLA program with these terms equals the MSU-rated capacity of the machines where the IBM Z IPLA program executes.

For more information about mainframe MSU-rated capacities, see the IBM Mainframe Exhibit web page.

Reference-based: The required license capacity of a IBM Z 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 an IBM Z IPLA sub-capacity program with these terms equals the capacity of the LPARs where the IBM Z IPLA program executes.

z/OS-based: The required license capacity of an IBM Z IPLA program with these terms equals the license capacity of z/OS on the machines where the IBM Z IPLA program executes.

For more information about mainframe MSU-rated capacities, see the IBM z Systems<sup>(R)</sup> Machines Exhibit, Z125-3901, or see the IBM Mainframe Exhibit web page.

IBM Z IPLA sub-capacity programs with reference-based terms add value to the parent program across the environment, regardless of where in the environment the IBM Z IPLA program executes.

An environment is defined as either a single or stand-alone machine or a qualified Parallel Sysplex<sup>(R)</sup>. You may have one or more different environments across the enterprise. To determine the required license capacity for each IBM Z IPLA program with referenced-based terms, each environment should be assessed separately.

When an IBM Z IPLA sub-capacity program with reference-based terms is used in a qualified Parallel Sysplex environment, the required license capacity of the IBM Z IPLA program must equal the license capacity of the parent program across the Parallel Sysplex. Qualified Parallel Sysplex refers to one where MLC pricing is aggregated across the sysplex.

# Sub-capacity eligibility

To be eligible for sub-capacity charging on select IBM Z IPLA programs, you must first implement and comply with all terms of one of the following:

- Sub-capacity Workload License Charges (WLC)
- Sub-capacity Entry Workload License Charges (EWLC)
- Sub-capacity Advanced Workload License Charges (AWLC)
- Sub-capacity Advanced Entry Workload License Charges (AEWLC)

To implement sub-capacity WLC, EWLC, AWLC, or AEWLC, a machine must be an IBM Z (or equivalent). On that machine:

- All instances of the OS/390 operating system must be migrated to the z/OS operating system.
- Any licenses for the OS/390 operating system must be discontinued.
- All instances of the z/OS operating 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, go to the IBM Z software pricing tools web page.

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 z Systems (R) Workload License Charges (Z125-6516).
- The complete terms and conditions for sub-capacity EWLC are defined in the IBM Customer Agreement - Attachment for EWLC, TWLC, zELC, and z/OS.e License Charges (Z125-6587).

You must comply with all of the terms of the AWLC or AEWLC offering, whichever is applicable:

- The complete terms and conditions for AWLC are defined in the IBM Customer Agreement - Attachment for IBM System  $z^{(R)}$  Advanced Workload License Charges (Z125-8538).
- The complete terms and conditions for AEWLC are defined in the IBM Customer Agreement - Attachment for IBM System z Advanced Entry Workload License Charges (Z125-8755).

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

#### On/Off CoD

To be eligible for On/Off CoD pricing, you must be enabled for temporary capacity on the corresponding hardware, and the required contract, Attachment for IBM System z On/Off Capacity on Demand (Z125-7883) must be signed prior to use.

# Statement of good security practices

IT system security involves protecting systems and information through intrusion prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a regulatory compliant, comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective.

**Important:** IBM does not warrant that any systems, products, or services are immune from, or will make your enterprise immune from, the malicious or illegal conduct of any party.

### **Prices**

For current prices, contact your IBM Representative.

Variable charges: The applicable processor-based one-time charge will be based on the group of the designated machine on which the program is licensed for use. If the program is designated to a processor in a group for which no charge is listed, the charge of the next higher group listed applies. For movement to a machine in a higher group, an upgrade charge equal to the difference in the then-current charges between the two groups will apply. For movement to a machine in a lower group, there will be no adjustment or refund of charges paid.

# **IBM Global Financing**

IBM Global Financing offers competitive financing to credit-qualified clients to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, from both IBM and other manufacturers or vendors. Offerings (for all client segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or go to the IBM Global Financing website for more information.

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# Regional availability

Argentina, Belize, Plurinational State of Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Bolivarian Republic of Venezuela

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### **Corrections**

### (Corrected on June 28, 2022)

The Description section was revised.