IBM Operations Analytics for z Systems, V3.1 and IBM Common Data Provider for z Systems, V1.1 combine to provide powerful operational insights

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At a glance

IBM Operations Analytics for z Systems™, V3.1 builds on the enterprise-wide operational insights delivered in previous releases to provide the following significant enhancements:

- Operational insights at a glance with a new Problem Insights dashboard view, providing summarizations of key operational issues along with actionable advice to accelerate further problem investigation and resolution
- Enhanced insights into multiple domains, including improved security insights and performance insights for IBM WebSphere® Application Server for z/OS®
- Support for open analytics architecture through the use of industry-standard data management tools

Operations Analytics for z Systems now includes IBM zAware V3.1 as a feature. Extending the proven capabilities of the IBM System z® Advanced Workload Analysis Reporter hardware feature previously available with z12 and z13™ Enterprise and Business Class hardware offerings, this integrated, self-learning analytics solution is available as a software solution for the first time.

IBM Common Data Provider for z Systems, V1.1 is a new offering that provides access to a wealth of z/OS operational data to any analytics platform in near real time.

Key capabilities include:

- Capability to collect a broad array of z/OS log types and all standard SMF record types
- Delivery of operational data to multiple consumers in streaming mode or in batch mode

Overview

IBM Operations Analytics for z Systems

Operations Analytics for z Systems enables users to rapidly search, visualize, and analyze the vast amounts of structured and unstructured operational data across IBM z Systems™ operating environments, including log, event, and service request data, as well as performance metrics. This solution provides organizations with the
tools they need to accelerate problem identification, isolation, and resolution across the entire enterprise from a single interface.

Building on this foundation, Operations Analytics for z Systems, V3.1 introduces the following significant enhancements.

**Actionable insights for IT operations**

The new IBM Operations Analytics for z Systems Problem Insights dashboard eliminates the need for tedious searching through volumes of operational data, putting key operational issues at your fingertips:

- Summarization of key issues per sysplex is derived from analysis of log messages and anomaly data provided by IBM System z Advanced Workload Analysis Reporter (IBM zAware).
- Problem Insights table provides synopsis of the key issues that affect selected sysplexes.
- Suggested Actions offer actionable advice to accelerate further problem investigation and resolution.
- Launch points into the IBM zAware graphical user interface allow for further analysis of anomaly data in the context of problem insights.

**Breadth of standard insights**

Expanded IBM WebSphere Application Server insights using SMF 120 records provide improved understanding of WebSphere Application Server request activities and CPU usage. System-level and controller-level dashboard views can help identify opportunities for performance optimization.

Enhanced security insights using SMF 80 records deliver insight that can prevent business impacts with near-real-time processing of z/OS security audit events and enable security administrators to be proactively notified of suspicious activity. The rich set of data provided by SMF 80 records enables you to build additional insights into specific resources of interest.

**Open data management architecture**

Operations Analytics for z Systems leverages industry-standard data management components with open interfaces. This architecture enables the implementation of analytics solutions that collect operational data only once while making them available to multiple destinations.

**Usability enhancements**

A new enhancement allows you to make use of the Expert Advice capability when your analytics server is deployed in isolation from the internet. This enhancement opens up this key Operations Analytics for z Systems capability to a broader range of customers.

The **IBM System z Advanced Workload Analysis Reporter (IBM zAware)** feature provides an integrated, self-learning analytics solution that helps identify unusual behaviors of workloads running on z/OS logical partitions (LPARs) as well as Linux on z Systems. IBM zAware is intended to help you to accelerate problem determination and improve service levels. It uses machine learning to provide visibility into system behavior, helping to optimize service, respond to problems quicker, and increase availability.

IBM zAware provides the following key new capabilities:

- Launch points into the IBM Operations Analytics for z Systems graphical user interface allow for further analysis of message information within the context of anomaly data.
- The capability to easily see messages that IBM zAware has never processed before makes deeper message analysis possible.
- Message history provides the capability to see how a message of interest has been analyzed by IBM zAware in other time periods without having to browse numerous sources of data.
- Alerting enables the customer to be notified of anomalies in their systems at a threshold of their choosing so they do not have to continuously monitor the IBM zAware user interface.

Previously delivered as a hardware feature, IBM zAware is now being introduced as a software offering. Leveraging IBM Secure Service Container technology, IBM zAware V3.1 combines superior time to value with the benefits of an agile software development and support model that continually provides enhancements and new function to customers. A supported migration path exists for all customers with the IBM zAware hardware feature.

**IBM Common Data Provider for z Systems**

Common Data Provider for z Systems provides access to z/OS operations data in near real time. With its support for all standard SMF record types and a broad set of log types, it is the single point of data collection you need to gain deep insights into the operations of your z/OS-based data center.

Common Data Provider for z Systems, V1.1 offers multiple output formats to provide consumers with optimal flexibility, and is able to forward operational data both in streaming mode and in batch mode.

Common Data Provider for z Systems is available as a stand-alone offering, as well as a component of the IBM Operations Analytics for z Systems offering.

**Key prerequisites**

IBM z Systems environments with the appropriate operating system.

For details, refer to the Hardware requirements and Software requirements sections.

**Planned availability date**

September 16, 2016

**Description**

Big data, led by mobile data volumes, poses a major challenge for businesses. The source of problems that are encountered in business operations is often in the IT infrastructure that supports the function; subject matter experts can be overwhelmed with finding the relevant information that is buried in volumes of distracting data that flow from multiple systems and applications. They need to manually parse, correlate, and attempt to understand the cause, location, and scope of a problem -- a process that can take too long to be effective.

IBM’s operational analytics offerings address this challenge in multiple ways.

**Operations Analytics for z Systems** and **IBM zAware** combine to provide application owners, application developers, and subject matter experts of all levels of experience with actionable insights into the health of their IT operations environment, offering efficient ways to accelerate problem identification, isolation, and repair.

- Identify unusual behaviors of your workloads using the self-learning capabilities of IBM zAware.
- Surface common issues that are hidden in the operational data and use suggested actions to accelerate problem resolution.
- Significantly reduce time required for root cause analysis by rapidly searching, filtering, and visualizing results from log, event, and performance data in a single application.
- Harness the domain expertise of z Systems through domain-specific standard insights and expert advice.
- Tailor the solution to your needs through flexible extension capabilities that are designed to be easy to use and leverage your organization's own expertise.
- Experience superior, smarter problem diagnostics through integration with IBM OMEGAMON(R), the premier performance management solution for z Systems.
- Facilitate knowledge exchange between IT personnel by sharing saved searches, leveraging run book knowledge, and creating custom dashboards.

Operations Analytics for z Systems, V3.1 and IBM zAware V3.1 provide the following significant enhancements that enable you to better manage your Operations Analytics for z Systems environment:

- **Near real-time operational insights into business-critical applications and their supporting infrastructure.** IBM Operations Analytics for z Systems introduces the Problem Insight dashboard, which provides at-a-glance insights into key operational issues. This dashboard provides a summarization of key issues per sysplex and offers actionable advice to accelerate further problem investigation and resolution. Near-real-time insights into the security of your z/OS-based data center have been expanded to leverage SMF80 records. The enhancements offer insights into unauthorized access attempts and provide proactive notification of suspicious activities, enabling early detection and prevention of potential security-related business impacts. Operations Analytics for z Systems extends insights into mission-critical IBM WebSphere Application Server for z/OS workloads through insights from SMF120-based performance data. With insight gained from WebSphere Application Server request activities and CPU usage, system-level and controller-level dashboard views can be used to identify opportunities for performance optimization. The capability to do near-real-time analysis of log data, performance metrics, and events in context of each other can greatly simplify and accelerate the task of identifying and resolving problems.

- **Efficiency and faster time to resolution.** IBM zAware and Operations Analytics for z Systems can now be used together to enable subject matter experts to perform faster problem determination. Message anomaly data can now be analyzed in the context of all other operational data, including events, performance data, and a broad set of log data. The integration between Operations Analytics for z Systems and IBM zAware also broadens the scope of the built-in alerting capabilities. You can now be notified of anomalous workload behaviors in addition to other important activities and patterns.

- **Powerful data collection capabilities.** Operations Analytics for z Systems now includes IBM Common Data Provider for z Systems, V1.1 and uses it as its default mechanism for collecting z/OS operational data. This provides access to a broader range of SMF data, as well as to VSAM Entry Sequence Data Set (ESDS) data stores.

**Common Data Provider for z Systems** puts the wealth of z/OS operational data at your fingertips, enabling you to use that data in the form most suitable for your organization.

- Collect once, use many times. Common Data Provider for z Systems can serve as a single collection point for all z/OS operational data. Data can be sent off platform for ingestion and analysis on an analytics platform of your choice. Common Data Provider for z Systems is capable of forwarding data to Logstash, which provides an extensible framework for communication with downstream analytics platforms. SMF data can also be loaded into IBM DB2(R) AnalyticsAccelerator for IBM z/OS(TM) (IDAA).
- Common Data Provider for z Systems can provide access to z/OS operational data in batch mode or in near-real-time streaming mode.
- Data collection made easy. Common Data Provider for z Systems has an intuitive, rich web user interface that enables you to quickly define data collection parameters, as well as ways in which the data can be consumed.
Value Unit-based pricing

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

For each z Systems 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, go to the IBM System z Software Pricing website.

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 z Systems IPLA program you selected, refer to the **Terms and conditions** section.

### Program number

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<th>VRM</th>
<th>Program name</th>
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<td>3.1.0</td>
<td>IBM Operations Analytics for z Systems</td>
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<tr>
<td>5698-ABJ</td>
<td>1.1.0</td>
<td>IBM Common Data Provider for z Systems</td>
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### Product identification number

<table>
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<th>Program PID number</th>
<th>Subscription and Support PID number</th>
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<tbody>
<tr>
<td>5698-ABH</td>
<td>5698-AAQ</td>
</tr>
<tr>
<td>5698-ABJ</td>
<td>5698-ABK</td>
</tr>
</tbody>
</table>

**Offering Information**
Product information is available on the IBM Offering Information website.

**Publications**

No publications are shipped with these products.

IBM Operation Analytics for z Systems, V3.1.0 and IBM zAware, V3.1.0 documentation are published in IBM Knowledge Center.

IBM Common Analytics for z Systems, V1.1.0 documentation is published in IBM Knowledge Center.

Publications can be viewed from a web browser with internet access.

**Services**

**Global Technology Services**

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings for the efficient installation, implementation, or integration of this product.

**Technical information**

**Specified operating environment**

**Hardware requirements**

**Note:** The hardware requirements may vary according to the volume of data ingested or managed by the program. Refer to the IBM Operations Analytics for z Systems, V3.1 and IBM Common Data Provider for z Systems, V1.1 documentation for further details and updates about hardware requirements.

For the IBM zAware feature, IBM zEC12, zBC12 or z13 hardware is required. The IBM zAware feature must be installed into a Linux-type or Secure Service Container LPAR.

**Software requirements**

IBM Common Data Provider for z Systems:

- IBM z/OS V2.1, or later, plus APAR OA49263
- IBM Java™ V1.7, or later
- z/OSMF V2.1, or later, plus APAR P152426

IBM Operations Analytics for z Systems:

- Red Hat Enterprise Linux (RHEL) 5.x 64-bit, RHEL 6.x 64-bit, RHEL 7.x 64-bit, SUSE Linux Enterprise Server (SLES) 11 64-bit, or SLES 12 64-bit on x86, or IBM z Systems
- Mozilla Firefox Extended Support Release 38, or later; Microsoft™ Internet Explorer V10 or V11; or Google Chrome V44, V45, or V47; or Microsoft EDGE
- Perl V5.8.8, or later
- Python V2.4.3, (with simplejson module), V2.6.6, V2.6.7, or V2.6.8
- 32-bit and 64-bit compat-libstdc++ and libc++ libraries

**Note:** The software requirements may vary depending on your specific configuration. Refer to the IBM Operation Analytics for z Systems, V3.1 documentation for further details and updates about software requirements.
IBM Electronic Support

The IBM Support Portal is your gateway to technical support. This includes IBM Electronic Support tools and resources, for software and hardware, to help save time and simplify support. The Electronic Support tools can help you find answers to questions, download fixes, troubleshoot, automate data collection, submit and track problems through the Service Request online tool, and build skills. All these tools are made available through your IBM support agreement. Read about the Electronic Support portfolio of tools on the IBM Electronic Support website.

You can also access the IBM Support Portal page and the online Service requests and PMRs tool for more support.

Planning information

Packaging

Each IBM Common Data Provider for z Systems program package consists of:

- A z/OS log data engine. The log collection engine is installed on each z/OS LPAR from which logs are to be collected.
- A Systems data engine. The Systems data engine is installed on each z/OS LPAR from which SMF records are to be collected.
- A data streaming engine. The data streaming engine is installed on each z/OS LPAR from which log or SMF data are to be collected.
- A browser-based configuration tool. The configuration tool is installed as a z/OSMF V2.1, or later, plus APAR PI52426 plug-in. Only a single instance of this configuration tool is needed to manage the aforementioned components.

Each IBM Operations Analytics for z Systems program package consists of:

- The analytics server.
- Insight Packs to manage supported z/OS log types, to provide standard domain knowledge and search capabilities for operational data, and to deliver advanced operational insights. The Insight Packs are installed on the analytics server.

Each IBM zAware package consists of:

- An IBM zAware software appliance image. This image can be installed into a Linux or Secure Service Container LPAR on IBM zEC12, zBC12 and z13 hardware.
- An IBM software appliance installer image. This image is required to install the IBM zAware software appliance image on supported hardware prior to IBM z13™ GA2. IBM z13 GA2 hardware includes the Secure Service Container.

Security, auditability, and control

IBM Operations Analytics for z Systems and IBM Common Data Provider for z Systems use the security and auditability features of the host software.

The customer 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.
### Value Unit exhibit VUE007

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<tr>
<th></th>
<th>MSUs minimum</th>
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<tr>
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<tr>
<td>Tier B</td>
<td>46</td>
<td>175</td>
<td>0.36</td>
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<td>Tier C</td>
<td>176</td>
<td>315</td>
<td>0.27</td>
</tr>
<tr>
<td>Tier D</td>
<td>316</td>
<td>+</td>
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### 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 z Systems IPLA product, the applicable Value Units would be:

<table>
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<tr>
<th>Tier</th>
<th>MSUs</th>
<th>Multiplied by Value Units per MSU</th>
<th>Equal Value Units</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Total</td>
<td>1,500</td>
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<td>343.50</td>
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</table>

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

### Ordering z/OS through the internet

Shopz 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). Shopz is available in the US and several countries in Europe. In countries where Shopz 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 Shopz website.

### Charge metric

<table>
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<th>Program name</th>
<th>Part number or PID number</th>
<th>Charge metric</th>
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<tbody>
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<td>IBM Operations Analytics for z Systems</td>
<td>5698-ABH</td>
<td>Value Unit</td>
</tr>
<tr>
<td>IBM Common Data Provider for z Systems</td>
<td>5698-ABJ</td>
<td>Value Unit</td>
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### Basic license

Translation from MSUs to Value Units

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<td>Tier C</td>
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<tr>
<td>Tier D</td>
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To order, specify the program product number and the appropriate license or charge option. Also, specify the desired distribution medium. To suppress shipment of media, select the license-only option in CFSW.

**Program name: IBM Operations Analytics for z Systems V3.1**
Program PID: 5698-ABH

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Subscription and Support PID: 5698-AAQ:

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Program name: IBM Common Data Provider for z Systems V1.1

Program PID: 5698-ABJ

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Subscription and Support PID: 5698-ABK

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</table>

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 number (PID) referenced above 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. This offering:

- Includes and extends the support services provided in the base support to include technical support via telephone.
- 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 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 S/390® and z Systems 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.

**Trade up**

Customers with IBM Operations Analytics for z Systems, V2.1.0 or V2.2.0, as well as customers with IBM zAware V1.0 or V2.0, may trade up or migrate to IBM Operations Analytics for z Systems, V3.1.0. Customers must have active Subscription and Support (S&S) for the replaced product. Customers are eligible for an entitlement to the replacement product that is equivalent to the entitlement they previously purchased for the replaced product. Additional entitlement will be available at discounted rates.

<table>
<thead>
<tr>
<th>IPLA replaced product</th>
<th>IPLA replacement product</th>
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<tbody>
<tr>
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<td>IBM Operations Analytics for z Systems V3.1.0, 5698-ABH</td>
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<table>
<thead>
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<th>Non-IPLA replaced product</th>
<th>IPLA replacement product</th>
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</thead>
<tbody>
<tr>
<td>IBM zAware V1.0 or V2.0</td>
<td>IBM Operations Analytics for z Systems V3.1.0, 5698-ABH</td>
</tr>
</tbody>
</table>

**Customized Offerings**

Product deliverables are shipped only through CBPDO, ServerPac, SystemPac, FunctionPac, and ProductPac®.

All of these customized offerings are offered for internet delivery in countries where Shopz 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, go to the Help section on the Shopz website.

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 include:

- 3590
- 3592

Most products can be ordered in ServerPac, SystemPac, FunctionPac, and ProductPac the month following their availability in CBPDO. z/OS can be ordered through CBPDO, ServerPac, and SystemPac at general availability. Many products will also be orderable in a Product 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 product ServerPac, go to the Help section on the Shopz website.

For additional information about the Product ServerPac option, refer to Software Announcement ZP12-0358, dated July 7, 2012.
Production of software product orders will begin on the planned general availability date.

- CBPDO shipments will begin one week after general availability.
- ServerPac, SystemPac, FunctionPac, and ProductPac 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.

**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.

This software license includes Software Subscription and Support (also referred to as Software Maintenance).

**Agreement for Acquisition of Software Maintenance**

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

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

These programs are licensed under the IBM 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 z Systems Operational Support Services - Support Line is an option if you desire added services.

**License Information number**

- L-VBSD-AAUH87 - IBM Operations Analytics for z Systems
- L-TKOK-ABZAJ4 - IBM Common Data Provider for z Systems

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

**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 on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, see the IBM Software Support Handbook.

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

**Program support**

Enhanced support, called Subscription and Support, includes telephone assistance, as well as access to updates, releases, and versions of the program as long as support is in effect. You will be notified of discontinuance of support with 12 months’ notice.

**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 Software Support Handbook.

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 time frame as specified in the Software Support Lifecycle policy for the program.

**IBM Operational Support Services - Support Line**

Yes

**System i Software Maintenance applies**

No

**Variable charges apply**

No

**Educational allowance available**

Yes. When ordering through the program number process, a 15% education allowance applies to qualified education institution customers.

Education Software Allowance Program applies when ordering through the program number process.

**ESAP available**

Yes, to qualified customers.

**Sub-capacity terms and conditions**

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

For more information on the Value Unit Exhibit for the System z IPLA program you selected, refer to the Ordering information section.

<table>
<thead>
<tr>
<th>Program number</th>
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<th>Terms</th>
</tr>
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<td>Common Data Provider for z Systems</td>
<td>execution-based</td>
</tr>
</tbody>
</table>

**Full-capacity mainframes**

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

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

For more information on mainframe MSU-rated capacities, go to the IBM z Systems Software Contracts website.
Reference based: The required license capacity of a System 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 a System z IPLA sub-capacity program with these terms equals the capacity of the LPARs where the System z IPLA program executes.

z/OS based: The required license capacity of a System z IPLA program with these terms equals the license capacity of z/OS on the machines where the System z IPLA program executes.

Reference based: The required license capacity of a System 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.

Full machine based: The required license capacity of a System z IPLA program with full machine based terms equals the MSU-rated capacity of the machines where the System z IPLA program executes.

For more information on mainframe MSU-rated capacities, refer to *The IBM System z Machines Exhibit*, Z125-3901, or visit the Mainframes section of the System z Exhibits website.

For additional information for products with reference-based terms, System z IPLA sub-capacity programs with reference-based terms adds value to the parent program across the environment, regardless of where in the environment the System z IPLA program executes.

An environment is defined as either a single or stand-alone machine or a qualified Parallel Sysplex®. You may have one or more different environments across the enterprise. To determine the required license capacity for each System z IPLA program with referenced-based terms, each environment should be assessed separately.

When a System z IPLA sub-capacity program with reference-based terms is used in a qualified Parallel Sysplex environment, the required license capacity of the System z IPLA program must equal with 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 System z IPLA programs, you must first implement and comply with all terms of either sub-capacity Workload License Charges (WLC) or sub-capacity Entry Workload License Charges (EWLC). To implement sub-capacity WLC or EWLC, a machine must be System z (or equivalent).

On that machine:

- All instances of the OS/390® operating system must be migrated to the z/OS operating systems.
- 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, visit the IBM z Systems Software Pricing website.
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 System z Workload License Charges (Z125-6516).
- The complete terms and conditions for sub-capacity EWLC are defined in the IBM Customer Agreement - Attachment for IBM System z 890 and 800 License Charges (Z125-6587).

Additionally, you must sign and comply with the terms and conditions specified in the amendment to the IPLA contract - Amendment for IBM System z9® and System z Programs Sub-Capacity Pricing (Z125-6929).

Once the amendment is signed, the terms in the amendment replace any and all previous System z IPLA sub-capacity terms and conditions.

**Statement of good security practices**

IT system security involves protecting systems and information through 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 lawful, 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 all local charges, contact your IBM representative.

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