IBM WebSphere eXtreme Scale for z/OS V8.5 offers the capabilities to handle explosive growth in business activity for competitive advantage

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At a glance

IBM® WebSphere® eXtreme Scale delivers Extreme Transaction Processing (XTP) capabilities that can ensure a smarter application infrastructure to support your most demanding business-critical applications.

WebSphere eXtreme Scale for z/OS® V8.5 is client software that can connect to WebSphere eXtreme Scale V8.5 for distributed servers. When connected to distributed servers, it offers these key benefits:

- Simple cache for enterprise applications running on IBM WebSphere Application Server that offers near-linear scalability to a broad variety of business applications with minimal invasive changes. WebSphere eXtreme Scale cache can now serve as a DynaCache replacement within IBM WebSphere Portal V7.0.
- Better integration across the WebSphere portfolio of products including IBM WebSphere Application Server V8.0 and V8.5, and the new IBM WebSphere Application Server Liberty Profile.
- New Data Serializer plug-in interfaces that allow storage of arbitrary data in the grid in a user-defined, serialized format.
- A Grid Query Console allowing inspection and invalidation of specific cache content.

```
For ordering, contact Your IBM representative or an IBM Business Partner.
For more information contact the Americas Call Centers at
800-IBM-CALL (426-2255).

Reference: LE001
```

Overview

IBM WebSphere eXtreme Scale can allow you to overcome traditional IT performance limitations to generate the levels of global scale, process efficiencies, and business intelligence needed for smarter outcomes and for sustainable competitive advantage for your business.

WebSphere eXtreme Scale for z/OS V8.5 offers the following new capabilities in an eXtreme Scale distributed server and z/OS client environment:

- Simple cache for enterprise applications running on IBM WebSphere Application Server to help you meet the growing needs of your business.
- Better integration across WebSphere portfolio of products:

- Supports IBM WebSphere Application Server V8.0 and V8.5.
- Supports IBM WebSphere Application Server Liberty Profile, including built-in caching profiles for HTTP Session Provider, a Client for Liberty, and a Server for Liberty.
- Supports IBM WebSphere Portal V7.0.
- Can now serve as a DynaCache replacement within WebSphere Portal V7.0, making content available in a centralized location.
- Supports WebSphere Commerce V6.0 and V7.0, including invalidation enhancements that enable faster, more efficient caching within WebSphere Commerce scenarios.
- A Grid Query Console, included with the WebSphere eXtreme Scale V8.5 UI, that allows monitoring, inspection, and invalidation of specific cache content.

WebSphere eXtreme Scale for z/OS V8.5 has configuration and functional limitations. For details, refer to the Limitations section.

Key prerequisites

- IBM System z®

Planned availability date

- May 25, 2012: Electronic distribution
- May 25, 2012: Media pack

Description

The following describes the benefits of a WebSphere eXtreme Scale grid as a whole. WebSphere eXtreme Scale for z/OS V8.5 has configuration and functional limitations. For details, refer to the Limitations section.

WebSphere eXtreme Scale V8.5 can help you overcome traditional IT performance limitations to dynamically adapt to the size and shape of your business.

Today's dynamic business environments and economic uncertainty mean organizations must work smarter to remain competitive and responsive to changing customer demands.

Key to working smarter is business agility and cost optimization. Our planet is becoming increasingly smart and interconnected. As more people around the planet join the digital world, they drive exponential growth of business and non-business transactions for everything from web commerce and RFID processing in dynamic supply chains to online social networking and gaming. In order to meet demands, you need to ensure that critical applications experiencing huge demand levels, requiring immediate response, or expanding to massive scale can deliver.

WebSphere eXtreme Scale delivers extreme transaction processing capabilities that can help ensure you have a smart service-oriented architecture (SOA)-based application infrastructure to support your most demanding business-critical applications. WebSphere eXtreme Scale V8.5 can allow you to overcome traditional IT performance limitations to generate the levels of global scale, process efficiencies, and business intelligence needed for smarter business outcomes, such as sustainable competitive advantage and maximized revenues.

WebSphere eXtreme Scale is designed to work in heterogeneous environments across all leading platforms and server virtualization environments. It processes massive volumes of transactions with extreme efficiency and linear scalability. WebSphere eXtreme Scale V8.5 operates as an in-memory data grid that dynamically processes, partitions, replicates, and manages application data and business logic across hundreds of servers.

With WebSphere eXtreme Scale V8.5, you get new capabilities to extend the value of a linearly scalable elastic data store to a broad range of business applications that utilize the WebSphere Application Server dynamic cache service. WebSphere eXtreme Scale V8.5 can ease the burden on the application developer by handling many of the common data store exception and retry tasks. In addition, WebSphere eXtreme Scale V8.5 can be integrated into existing management tools.

The client runtime on WebSphere eXtreme Scale for z/OS V8.5, in conjunction with WebSphere eXtreme Scale V8.5 for distributed platforms, offers these new features:

- Simple cache for enterprise applications running on WebSphere Application Server that offers near-linear scalability to a broad variety of business applications with minimal invasive changes. This lets you meet the growing needs of your business.
- New Data Serializer plug-in interfaces that allow storage of arbitrary data in the grid in a user-defined, serialized format, such that query, indexes, and application code can more efficiently interrogate data object data without inflating them into a Java™ object form.
- Cache entries that can now be stored off-heap.
- XTP capability enhancements that are designed to offer better performance, consistent and predictable response times, and lower memory costs.
- Support for Windows™ and .Net applications through ADO.Net Data Services specification support.

WebSphere eXtreme Scale enhances applications to support growing business needs through the following innovative usage scenarios and configurations:

- **Simple data and database:** Applications can access data structures to help improve performance and throughput using a WebSphere eXtreme Scale configuration as a local cache. WebSphere eXtreme Scale enhances this traditional data-caching scenario by offering failover capability.
- **Client/server:** A Java Virtual Machine (JVM) can have a local WebSphere eXtreme Scale grid, which sits in front of a remote grid serving as a "near cache" for a subset of the data. This allows you to leverage a large remote cache to offload backend processing or speed up access to cached results. Applications can use the distributed locking services provided by the remote grid to coordinate access to shared data across clients.
- **Map, reduce support:** WebSphere eXtreme Scale clients can invoke agents that run against massive amounts of data on multiple nodes in parallel. They can then aggregate the results stored in the grid in parallel.

Extreme scalability of application patterns and usage scenarios is facilitated by the use of a noncentralized, peering configuration, and dynamic deployment model allowing WebSphere eXtreme Scale maps to potentially span thousands of JVMs and allowing extremely large datasets.

In addition, WebSphere eXtreme Scale lets you add more partitions to help increase capacity and includes efficient, new algorithms to allow in-memory caches to grow elastically as the number of available JVMs or actual machines changes.

Traditionally, distributed cache products use Map APIs as their primary programming model. WebSphere eXtreme Scale offers this, and allows graphs of objects to be easily pushed to the cache. Simple Java objects can be annotated, and a simpler API transparently allows these graphs to be fetched from the grid, as well as to push any changes made by the application back to the grid. This can significantly simplify programming compared with traditional JCache or Map-based APIs, helping to improve productivity of the application developers by allowing them to focus on the core business logic.

Further, as the amount of data within the data grid grows, and usage scenarios become more ubiquitous, it is increasingly important to address challenges related to operational flexibility. A major challenge relates to managing a data grid running on thousands of servers.

The WebSphere eXtreme Scale Catalog Service automatically lays out data (primaries and replicas) across the set of online servers in a balanced fashion. As servers are started or stopped, it automatically adjusts and elastically moves data across the grid to help ensure that failed replica servers are replaced, and spreads the data across all servers in the grid for optimum performance and continuous availability.

WebSphere eXtreme Scale offers a flexible approach to the deployment of grid components or an existing cluster packaging and deployment framework. This is accomplished via the introduction of a centralized coordinator service, called the Catalog Service, that helps:

- Achieve high availability by clustering, and uses synchronous memory replication among grid members to persist the runtime state of the data grid
- Enable optimal performance by automatically balancing data and partitions over the set of servers hosting a grid

The new WebSphere Application Server console extensions allow administrators and deployers to enable eXtreme Scale session persistence, and to enable eXtreme Scale as a DynaCache provider directly from the WebSphere Application Server console. With the WebSphere eXtreme Scale V8.5 console, administrators and deployers can monitor eXtreme Scale grids in a fashion that is already integrated into their current usage flows.

For complete product information, visit

http://www.ibm.com/software/webservers/appserv/extremescale

Accessibility by people with disabilities

Features of the products that support use by people with disabilities include:

- Using assistive technologies such as screen readers and screen magnifier software
- Customizing display attributes such as color, contrast, and font size
- Operating the system using only the keyboard

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) can be requested via IBM's website at

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

Value Unit-based pricing

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

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

Subsequent acquisitions of Value Unit priced programs offer additional price benefits. The quantity of each System z IPLA program that you have acquired is referred to as

entitled license capacity. If you wish to grow your entitled license capacity for a System z IPLA program, the calculation to determine additional needed Value Units is based upon the number of Value Units already acquired.

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

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

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

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

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

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

Product positioning

WebSphere eXtreme Scale complements the WebSphere Application Server family of products by providing a distributed caching platform for WebSphere business applications and can run with many WebSphere stack products. WebSphere eXtreme Scale V8.5 goes beyond these simple network attached cache capabilities, providing a flexible and robust solution enabling more sophisticated caching scenarios where applications and data may be located on the same server. WebSphere Business Events eXtreme Scale software integrates WebSphere eXtreme Scale and WebSphere Business Events into a single product, supporting customers with high volumes of business events flowing through their enterprise.

Business Partner information

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

https://www.ibm.com/partnerworld/mem/sla.jsp?num=212-095

Reference information

For information about IBM WebSphere DataPower® XC10 Appliance, refer to Hardware Announcement 112-075, dated April 24, 2012.

For information about DataPower Appliance Support Registration, refer to Software Announcement 211-136, dated April 05, 2011.

For complete information regarding WebSphere Application Server V8.5 Liberty Profile, refer to Software Announcement 212-109, dated April 24, 2012.

Program number

```
Program Name                              Program Number

IBM WebSphere eXtreme Scale for z/OS V8.5    5655-VX8
```

```
for z/OS
```

Product identification number

```
                  Subscription and
Program PID number  Support PID number

5655-VX8            5655-V67
```

Offering Information

Product information is available via the Offering Information website

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

Publications

No publications are shipped with this product.

The following WebSphere eXtreme Scale V8.5 user assistance is available:

- Product documentation Overview Guide, Administration Guide, and Programming Guide
- Product forum for discussing WebSphere eXtreme Scale V8.5 topics with the community
- Access to articles, podcasts, and tutorials in the WebSphere Developer's Community for Emerging Technologies in

  http://www.ibm.com/developerworks/spaces/emerge

The total set of product documentation and user assistance is available from the WebSphere eXtreme Scale portal at

http://www.ibm.com/developerworks/wikis/display/extremescale

To view a downloaded version of the InfoCenter, you must have a copy of either the WebSphere Help System or Eclipse installed on your local machine. Terms and conditions for use of the machine-readable files are shipped with the files.

The IBM Publications Center

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

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the US) or customer number for 20 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries, free of charge.

Technical information

Specified operating environment

Hardware requirements

- Any hardware that supports z/OS and z/OS.e V1.7, or later.
- Minimum 512 MB central storage, 1 GB recommended. Refer to the program directory for detailed disk space requirements.
- For full distributed grid functionality, at least one system running WebSphere eXtreme Scale for Distributed platforms. For additional details, refer to Software Announcement 212-099, dated April 24, 2012.

Software requirements

- Operating system (31 bit and 64 bit):
  - z/OS: V1.10, V1.11, V1.12, or V1.13
  - z/OS.e: V1.7 or V1.8
- WebSphere eXtreme Scale for z/OS client is supported on:
  - WebSphere Application Server V7.0.0.21, or later
  - WebSphere Application Server V8.0.0.2, or later
  - WebSphere Application Server V8.5.0, or later

For information about recommended WebSphere Application Server fixes, visit

    http://www.ibm.com/support/docview.wss?
    rs=180&context=SSEQTP&uid=swg27004980

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a readme file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

Companion products

The following products could be purchased with this product:

- IBM WebSphere DataPower XC10 Appliance - Provides a purpose-built, easy-to-use appliance designed for simplified deployment and hardened security at the caching tier of your enterprise application infrastructure. The WebSphere eXtreme Scale client for z/OS is tested and certified to work with the WebSphere DataPower XC10 Appliance.
- IBM WebSphere Adapters - Helps you integrate applications, technologies, and partner systems within and outside the enterprise. This extended range of adapters is integral to a scalable integration infrastructure for your on-demand business.
- IBM WebSphere Integration Developer - The declarative visual drag-and-drop developer tool for WebSphere Enterprise Service Bus (ESB) as well as IBM WebSphere Adapters and IBM DataPower. It supports integration with IBM Business Process Manager Advanced.
- IBM Business Process Manager V7.5 - A comprehensive and consumable business process management platform that provides total visibility and management of your business processes. It includes tooling and run-time modules for process design, execution, monitoring, and optimization, and is specifically designed to make it easy for process owners and business users to engage directly in the improvement of their business processes. It provides a single Business Process Manager platform with multiple configurations to match a company's desired entry point to Business Process Manager.
- IBM WebSphere Business Events - An offering designed specifically for managing business events flowing across systems and people, with the specific goal of providing timely insight and enabling response.
- IBM Business Monitor - Helps you get real-time visibility of business processes and actively manage them.
- IBM WebSphere MQ - Provides standards-based, reliable, and secure connectivity between applications and systems, giving access to more than 80 different platform configurations.
- IBM WebSphere Message Broker - Running on top of WebSphere MQ, helps you extend your connectivity between applications with high-performance transformation and routing by integrating a wide range of applications and various data formats.
- IBM WebSphere DataPower SOA Appliances - Easy-to-deploy network devices that simplify, help secure, and accelerate XML and web services deployments and extend core service-oriented architecture (SOA) infrastructure components such

as WebSphere ESB, WebSphere MQ, WebSphere MB, and IBM Business Process Manager.

- WebSphere Extented Deployment - Seamlessly integrates into a WebSphere platform installation, easily accessible using the same administration console as WebSphere Application Server, WebSphere ESB, and IBM Business Process Manager.

Limitations

WebSphere eXtreme Scale for z/OS V8.5 only supports the WebSphere eXtreme Scale client runtime running in WebSphere Application Server for z/OS V6.1, V7.0, V8.0, and V8.5 runtimes. The following are configuration limitations as compared to WebSphere eXtreme Scale on distributed platforms:

- WebSphere Application Server client applications can access remote WebSphere eXtreme Scale grids and can locally cache data via the WebSphere eXtreme Scale "near cache" technology. Additionally, WebSphere eXtreme Scale can be used as a local cache.
- WebSphere eXtreme Scale servers are not supported in a z/OS environment. WebSphere eXtreme Scale clients can interact with WebSphere eXtreme Scale servers executing on other platforms.

For additional information, refer to the license information document that is available on the IBM Software License Agreement website

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

Planning information

Globalization

WebSphere eXtreme Scale for z/OS V8.5 provides basic enablement support for all locales. WebSphere eXtreme Scale for z/OS V7.1.1 provides translations for Japanese.

Note: WebSphere eXtreme Scale for z/OS V8.5 bundled prerequisite will include translations for the following languages (if available):

- French
- Italian
- German
- Spanish
- Brazilian Portuguese
- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese
- Czech
- Hungarian
- Polish
- Russian
- Romanian

Common Criteria evaluation

WebSphere eXtreme Scale for z/OS leverages security functionality from the WebSphere Application Server V7 runtime environment, and there has been no direct security functionality added to these products. Therefore, a Common Criteria evaluation is not necessary because these products rely on the underlying runtime

environment for security function and are neither Information Assurance (IA®) nor IA-enabled.

Software Subscription and Support

Software Subscription and Support (also referred to as Software Maintenance) is included with licenses purchased through Passport Advantage® and Passport Advantage Express®. Product upgrades and technical support are provided by the Software Subscription and Support (Software Maintenance) offering as described in the Agreements. Product upgrades provide the latest versions and releases to entitled software, and technical support provides voice and electronic access to IBM support organizations, worldwide.

IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with each program license acquired. The initial period of Software Subscription and Support (Software Maintenance) can be extended by the purchase of a renewal option, if available.

Packaging

IBM WebSphere eXtreme Scale for z/OS V8.5 ships on DVDs.

Security, auditability, and control

The products in this software announcement 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.

Software Services

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

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

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

Ordering information

This product is only available via Passport Advantage. It is not available as shrinkwrap.

Charge metric

Program name	PID number	Charge unit description
IBM WebSphere eXtreme Scale for z/OS V8.5	5655-VX8	Value Unit Authorizations
IBM WebSphere eXtreme Scale for z/OS V8.5 Subscription & Support	5655-V67	Value Unit Authorizations

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

```
Program
number     Program name                      Value Unit exhibit

5655-VX8   IBM eXtreme Scale for z/OS V8.5   VUE007
```

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

- The System z IPLA program you select

- The applicable Value Unit Exhibit

- The applicable terms

- Whether your current mainframes are full capacity or sub-capacity

Ordering z/OS through the Internet

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

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

Passport Advantage customer: Media pack entitlement details

Customers with active maintenance or subscription for the products listed are entitled to receive the corresponding media pack.

```
Media pack description                    Part number

IBM WebSphere eXtreme Scale V8.5          S01709R
  Multiplatform English 3590 tape


5655-VX8 - IBM WebSphere eXtreme Scale for z/OS V8.5
Basic license one-time charge

Program package                                 Entitlement ID

Per value unit Authorizations                   S01709S
```

Basic license

On/Off CoD

WebSphere eXtreme Scale for z/OS V8.5 is eligible for On/Off 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     0.45
Tier B     46-175   0.36
Tier C     176-315  0.27
Tier D     316+     0.2
```

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: WebSphere eXtreme Scale for z/OS V8.5
Program PID:  5655-VX8

Entitlement                              License option/
identifier    Description                Pricing metric

S01709S       WebSphere eXtreme Scale    Basic OTC, per Value Units
              for z/OS V8.5              Basic OTC, per MSU-DAY TUC


Orderable supply ID    Language                 Distribution medium

S01709R                English                  3590 tape
Subscription and Support PID: 5655-V67

Entitlement                        License option/
identifier  Description            Pricing metric

S015M5H      WebSphere eXtreme Scale  Basic ASC, per Value Unit SW S&S
              for z/OS               No charge, decline SW S&S
             Subscription and Support Per MSU SW S&S Registration


Orderable supply ID    Language                 Distribution medium

 S015M5G                English                  Hardcopy pub
```

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 (IAASM). 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 cancelled by you.

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

Single version charging

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

Customized Offerings

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

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

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

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

- 3590
- 3592

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

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

Terms and conditions

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

This product is only available via Passport Advantage. It is not available as shrinkwrap.

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.

License Information form number

- IBM WebSphere eXtreme Scale for z/OS V8.5: L-STHN-8RMLJH

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

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

Limited warranty applies

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, consult the IBM Software Support Handbook found at

   http://www.ibm.com/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 (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) 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.

Other terms

Volume orders (IVO)

No

IBM International Passport Advantage Agreement

Passport Advantage applies

Yes, and through the Passport Advantage website at

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

Usage restriction

Yes. For additional information, refer to the License Information document that is available on the IBM Software License Agreement website

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

Software Subscription and Support applies

Yes. All distributed software licenses include Software Subscription and Support (also referred to as Software Maintenance) for a period of 12 months from the date of acquisition, providing a streamlined way to acquire IBM software and assure technical support coverage for all licenses. Extending coverage for a total of three years from date of acquisition may be elected.

While your Software Subscription and Support is in effect, IBM provides you assistance for your routine, short duration installation and usage (how-to) questions, and code-related questions. IBM provides assistance via telephone and, if available, electronic access, only to your information systems (IS) technical support personnel during the normal business hours (published prime shift hours) of your IBM support center. (This assistance is not available to your end users.) IBM provides Severity 1 assistance 24 hours a day, every day of the year. For additional details, consult your IBM Software Support Handbook at

http://www.ibm.com/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, or failures caused by products for which IBM is not responsible under this agreement.

For more information about the Passport Advantage Agreement, visit the Passport Advantage website at

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

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

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

Program number	Program name	Terms	Parent, if applicable
5655-VX8	WebSphere eXtreme Scale for z/OS V8.5	Execution-based	NA

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, visit

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

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

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

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 IB 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 System z Software Pricing website

  http://ibm.com/zseries/swprice

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

- The complete terms and conditions of sub-capacity WLC are defined in the IBM Customer Agreement - Attachment for 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.

IBM Getting Started Sub-capacity Pricing for z/OS IPLA Software applies.

Sub-capacity utilization determination

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

On/Off Capacity on Demand (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 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 comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or

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