IBM TotalStorage Productivity Center for Replication for System z V3.4 delivers enhanced management and new high availability features for IBM System z

At a glance

IBM Total Storage Productivity Center for Replication for System z (5698-TPC) delivers:

- Volume protection to exclude any volumes from being used for disaster protection copy operations
- User roles for administrative levels of access
- Site awareness to indicate site locations of the storage volumes and help assure copies are done correctly
- Metro Global Mirror support for the DS8000, providing failover and failback support, fast re-establishment of three-site mirroring, quick re-synchronization of mirrored sites using incremental changes only, and data currency at the remote site

What's new in Total Storage Productivity Center for Replication for System z V3.4:

- Command prompting to confirm storage administrator actions prior to executing the copy services commands
- Global Mirror support for IBM System Storage SAN Volume Controller (SVC), providing asynchronous copy services protection over long distances
- Advanced copy session support for SVC for two-site replication management, including failover and failback
- Support for Space Efficient FlashCopy and Dynamic Volume Expansion capabilities of IBM System Storage DS8000
- Basic HyperSwap (also in new product IBM TotalStorage Productivity Center for Replication Basic Edition for System z V3.4 (5698-TRB))

For ordering, contact:

Your IBM representative, an IBM Business Partner, or the Americas Call Centers at

800-IBM-CALL Reference: LE001

Overview

IBM TotalStorage® Productivity Center for Replication for System z™ (5698-TPC) is designed to manage the advanced copy services provided by IBM Enterprise Storage Server™ (ESS) Model 800, IBM System Storage™ DS8000™, IBM System Storage DS6000™, and IBM System Storage SAN Volume Controller (SVC).

A new product, IBM TotalStorage Productivity Center for Replication Basic Edition for System z V3.4 (5698-TRB) enables Basic HyperSwap™ on z/OS®, which allows the management of disk
replication services using an intuitive GUI on z/OS systems.

IBM TotalStorage Productivity Center for Replication for System z V3.4 extends existing support for Global Mirror and two-site copy services to include SVC. Enhancements for SVC in V3.4 include:

- Support for asynchronous mirroring (Global Mirror) for SVC
- Advanced copy session support for SVC for two-site replication management, including failover and fallback
- Practice volume support for SVC in Metro Mirror and Global Mirror configurations that lets IT managers practice disaster recovery scenarios between two locations without disrupting online production environments
- Display SVC cluster information on the Device Overview page
- Change to the background copy rate for SVC FlashCopy® sessions

Additional enhancements for TotalStorage Productivity Center for Replication for System z V3.4 include:

- Ability to fail Metro Mirror and Global Copy session command if the target volume is online
- Support for Space Efficient FlashCopy and Dynamic Volume Expansion capabilities of the DS8000
- Basic HyperSwap on z/OS

By leveraging the capabilities of TotalStorage Productivity Center for Replication for System z, you can increase administrator efficiency by utilizing a single tool to manage all copy services functions for IBM storage hardware, thus helping improve overall disaster recovery preparedness.

Starting with this release, if you have purchased the TotalStorage Productivity Center for Replication V3.3 base feature and have a current Subscription and Support contract, you are entitled to the TotalStorage Productivity Center for Replication Two Site BC V3.4 feature without the need to purchase an additional license. With V3.4, you could save up to 50% off previous list pricing for TotalStorage Productivity Center for Replication offerings.

IBM TotalStorage Productivity Center for Replication Basic Edition for System z is offered as a no charge license for System z customers so they can enable Basic HyperSwap capability. You have the option to upgrade to IBM TotalStorage Productivity Center for Replication for System z to take advantage of the advanced copy services functions.

Key prerequisites

Refer to Hardware and software requirements section.

Planned availability date

April 18, 2008

Description

IBM TotalStorage Productivity Center for Replication is designed to support hundreds of replication sessions across thousands of data volumes and supports both open and z/OS-attached volumes. IBM TotalStorage Productivity Center for Replication for System z V3.4 adds support for Global Mirror and two-site copy services for IBM System Storage SAN Volume Controller (SVC) customers.

Usability enhancements in IBM TotalStorage Productivity Center for Replication for System z V3.4 (5698-TPC):

- Shows the SVC cluster information on the Device Overview page so you are able to relate the volume to a single SVC cluster, instead of any of the SVC clusters behind the SVC CIMOM.
- Accepts a session setting that may be turned on or off to request that Metro Mirror or Global Mirror establish be failed, if the target volume is varied online. This may help prevent a Metro Mirror or Global Mirror relationship from copying over data that is being used by z/OS.
• Allows you to change the rate of background copy that occurs for SVC FlashCopy. The copy rate is a percentage to define how much resource SVC uses to get all of the tracks moved from the source to the target volume. A value of zero means no active background copy is performed, while a value of one hundred specifies that the background copy should complete in the shortest time possible.

• Supports IBM System Storage DS8000 Space Efficient volumes in the target role for FlashCopy sessions. IBM TotalStorage Productivity Center for Replication reacts to volumes that are dynamically expanded by displaying the new volume size. You receive a warning when the start of a session, with a volume that has been expanded, will cause an error.

IBM TotalStorage Productivity Center for Replication is designed to monitor all copy session types and to report on the volumes exposed at the disaster recovery site (not in synchronization with the source site).

Business continuity

TotalStorage Productivity Center for Replication for System z is designed to scale to many thousands of data volumes, providing the capability to freeze and run within a Metro Mirror environment, and provide FlashCopy Establish for FlashCopy operations with minimum application impact. The TotalStorage Productivity Center for Replication for System z Three Site BC optional feature provides three-site recovery management, supporting DS8000 Metro Global Mirror. The TotalStorage Productivity Center for Replication Three Site BC function is designed to support fast failover and failback, fast re-establishment of three-site mirroring, data currency at the remote site with minimal lag behind the local site, and quick re-synchronization of mirrored sites using incremental changes only.

The TotalStorage Productivity Center for Replication Manager provides command line interfaces for all of its tasks to enable automation via scripts or workflows for advanced copy services.

Basic HyperSwap

IBM TotalStorage Productivity Center for Replication Basic Edition for System z (5698-TRB) (and TotalStorage Productivity Center for Replication for System z) enables Basic HyperSwap on z/OS to provide a low-cost, single-site, high-availability disk solution, which allows the configuration of disk-replication services using an intuitive GUI from z/OS. The intention is that with Basic HyperSwap function enabled, seamlessly swapping between primary and secondary disk volumes in the event of planned and unplanned outages such as hardware maintenance, testing, or device failure, can be accomplished from z/OS. When using Basic HyperSwap, TotalStorage Productivity Center for Replication helps eliminate single disk failures as a source of application outages by enabling you to specify a set of storage volumes to be synchronously mirrored. For example, in the event of a permanent I/O error, I/O requests can be automatically switched to the secondary copy, thereby masking the failure from the application and minimizing the need to restart the application (or system) after the failure. You can also initiate a planned failover to a secondary disk for the purpose of initiating hardware maintenance on primary storage controllers, or simply to periodically test the function. You can switch back to your preferred configuration via the GUI or operator commands.

Additional IBM TotalStorage Productivity Center for Replication functions are offered by IBM TotalStorage Productivity Center for Replication for System z. The IBM TotalStorage Productivity Center for Replication for System z family of products provides centralized administration of SAN storage devices including the management of IBM FlashCopy, Metro Mirror, and Global Mirror capabilities for the IBM Enterprise Storage Server (ESS) Model 800, IBM System Storage DS6000, DS8000, and SVC on z/OS.

If you are using TotalStorage Productivity Center for Replication Basic Edition for System z and desire the advanced features of two-site replication and three-site replication, you will be required to purchase a license for TotalStorage Productivity Center for Replication for System z. In addition, if you are running TotalStorage Productivity Center for Replication Basic Edition for System z in conjunction with IBM System Services Runtime Environment for z/OS, instead of IBM WebSphere® Advanced Server, and wish to upgrade to the advanced features of two-site replication and three-site replication, you will be required to purchase a license for IBM WebSphere Advanced Server and install the full version of TotalStorage Productivity Center for Replication for System z.

Accessibility by people with disabilities

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

Section 508 of the U.S. Rehabilitation Act

IBM TotalStorage Productivity Center for Replication for System z V3.4 and IBM TotalStorage Productivity Center for Replication Basic Edition for System z V3.4 are capable as of April 18, 2008, when used in accordance with IBM’s associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) can be requested on the following Web site:


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 the **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 Web site:

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

IBM TotalStorage Productivity Center for Replication for System z is designed to support hundreds of replication sessions across thousands of volumes and supports both open and z/OS-attached volumes. It is also designed to monitor all copy session types and to report on the volumes exposed at the disaster recovery site (not in synchronization with the source site).
IBM intends to remove the current prerequisite for IBM System Services Runtime Environment for z/OS or IBM WebSphere Advanced Server for z/OS that is required in order to run IBM TotalStorage Productivity Center for Replication for System z and IBM TotalStorage Productivity Center for Replication Basic Edition for System z.

All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice and represent goals and objectives only.

Reference information

For information on IBM TotalStorage Productivity Center for Replication for System z V3.3, refer to Software Announcement 207-074, dated April 18, 2007.

For information on IBM TotalStorage Productivity Center for Replication V3.4 (distributed platforms), refer to Software Announcement 208-079, dated April 8, 2008.

For information on IBM System Services Runtime Environment for z/OS V1.1, refer to Software Announcement 208-075, dated April 8, 2008.

Business Partner information

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

BP Attachment for Announcement Letter 208-076


Trademarks

System z, DS8000, Enterprise Storage Server, System Storage, DS6000, and HyperSwap are trademarks of International Business Machines Corporation in the United States or other countries or both.

TotalStorage, z/OS, FlashCopy, and WebSphere are registered trademarks of International Business Machines Corporation in the United States or other countries or both.

Other company, product, and service names may be trademarks or service marks of others.

Education support

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

For additional information, visit http://www-306.ibm.com/software/tivoli/education/

Offering Information

Product information is available via the Offering Information Web site

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

Publications

No publications are shipped with these programs. The following English publications can be ordered after April 18, 2008. Translated publications will be available 60 days after the English publications are available.

Title Order number

IBM United States Announcement 208-076
The IBM Publications Center

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

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

News of many publications may be subscribed to via Mysupport.


Technical information

Specified operating environment

Hardware and software requirements: TotalStorage Productivity Manager for Replication for System z™ (5698-TPC) server requires the following hardware and software:

- Machine: System z architecture CPU that supports the operating system
- Minimum disk space requirement: refer to the product README file
- Operating system: z/OS® V1.7 with APAR OA21013
  
  Note: If using the HyperSwap™ function, z/OS V1.9 with APAR OA20658 or V1.10 is required.

- SMP/E
- DB2® V8.1, or later (an optional dependency for customers who want to use DB2)
- IBM storage controller with the Advanced Copy features (This includes IBM ESS Models 800, DS6000™, DS8000™, and SVC.)
- WebSphere® Application Server V6.1
- TCP/IP connection to manage storage systems

TotalStorage Productivity Manager for Replication Basic Edition for System z (5698-TRB) server requires the following hardware and software:

- Machine: System z architecture CPU that supports the operating system.
- Minimum disk space requirement: refer to the product README file.
- z/OS V1.9 with APAR OA20658, or z/OS V1.10.

IBM System Services Runtime Environment for z/OS V1.1 (5655-S26).

- A no charge product that provides native Web services for z/OS. Refer to Software Announcement 208-075, dated April 8, 2008, for more information. It is planned to be
generally available April 18, 2008 (in CBPDO format), and May 30, 2008 (in ServerPac).

- You may use WebSphere Application Server for z/OS V6.1.0 (5655-N01) in place of IBM System Services Runtime Environment for z/OS.

- SMP/E.
- DB2 V8.1, or later, (an optional dependency for customers who want to use DB2).
- IBM storage controller with the Advanced Copy feature Metro Mirror (This includes IBM ESS Models 800, DS6000, and DS8000.)
- TCP/IP connection to manage storage systems.

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

IBM TotalStorage Productivity Center for Replication for System z V3.4 and IBM TotalStorage Productivity Center for Replication Basic Edition for System z V3.4 are available via AAS, as priced software offerings.

Due to the importance of the management capabilities and graphical user interface (GUI) of IBM TotalStorage Productivity Center for Replication for IBM storage platforms, it is recommended that any of the following products that utilize the advance copy services of those individual products (including, FlashCopy®, Metro Mirror, Global Mirror) are included in all IBM TotalStorage Productivity Center for Replication for System z solutions:

- IBM System Storage™ DS8000
- IBM System Storage DS6000
- IBM Enterprise Storage Server™ (ESS) 800
- IBM System Storage SAN Volume Controller (SVC)

IBM TotalStorage Productivity Center for Replication for System z V3.4 optional priced feature for Three Site BC, is highly recommended for any customer implementing Metro Global Mirror solutions.

In addition, at the time of sale of IBM TotalStorage Productivity Center for Replication V3.4, IBM TotalStorage Productivity Center V3.3.1 should be considered as a complimentary product because its advanced functions are designed to:

- Manage the capacity utilization of file systems and databases, and automate file system capacity provisioning by including TotalStorage Productivity Center and IBM Tivoli Provisioning Manager
- Perform device configuration and management of multiple devices from a single user interface
- Tune and proactively manage the performance of storage devices on the SAN
- Manage, monitor, and control SAN fabrics
- Automate storage tasks such as provisioning with advanced workflows offered in a combined solution

IBM TotalStorage Productivity Center is designed to bring together management of the SAN, storage devices, and host resources, including databases and file systems, into a single control point.

IBM TotalStorage Productivity Center can provide a modular, integrated set of products that can be purchased individually or in different combinations.

IBM TotalStorage Productivity Center for Data

IBM TotalStorage Productivity Center for Data offers capacity management of file systems and databases. IBM TotalStorage Productivity Center for Data is designed to provide over 300 enterprise-wide reports, monitoring and alerts, policy-based action, and file system capacity automation in heterogeneous environments.
IBM TotalStorage Productivity Center for Fabric

IBM TotalStorage Productivity Center for Fabric offers management, monitoring, and control of SAN fabric. IBM TotalStorage Productivity Center for Fabric can help automate device discovery, topology rendering, error detection fault isolation, SAN error predictor, zone control, real-time monitoring and alerts, and event management for heterogeneous enterprise SAN environments. In addition, IBM TotalStorage Productivity Center for Fabric has support for collecting performance statistics from IBM TotalStorage, Brocade, Cisco, and McDATA fabric switches and directors that implement the SNIA SMI-S specification.

IBM TotalStorage Productivity Center for Disk

IBM TotalStorage Productivity Center for Disk offers device management and configuration and disk performance management. IBM TotalStorage Productivity Center for Disk is designed to enable device configuration and management of SAN-attached devices from a single console. Device management and configuration is provided for the DS6000 and DS8000 product families, IBM ESS 800, SVC, and DS4000™ (FASiT). In addition, it has performance management capabilities, including thresholds and gauges, that can help allow proactive management of storage performance. It is designed to allow a user to gather and analyze historical and real-time performance metrics for IBM ESS, DS8000, DS6000, DS4500, DS4800, and SVC. IBM TotalStorage Productivity Center for Disk also includes the Storage Planner which is designed to analyze workload profiles and can provide advice on the location to choose or create volumes in an IBM ESS 800.

Performance considerations: IBM TotalStorage Productivity Center for Replication for System z and IBM TotalStorage Productivity Center for Replication Basic Edition for System z performance will vary depending upon a customer’s particular configuration and customization.

Planning information

Direct customer support: Direct customer support is provided by IBM Operational Support Services — SoftwareXcel. This fee service enhances your productivity by providing voice and electronic access into the IBM support organization. IBM Operational Support Services — SoftwareXcel helps answer questions pertaining to usage and suspected software defects for eligible products.

Installation and technical support is provided by Global Services. For more information call 800-IBM-4YOU (426-4968).

For technical support or assistance, contact your IBM representative or visit http://www.ibm.com/support

Packaging: IBM TotalStorage Productivity Center for Replication for System z is distributed with:

- International Program License Agreement (Z125-3301)
- License Information document (GC23-6310)
- Product tapes
- IBM TotalStorage Productivity Center for Replication on System z Program Directory (GI11-7963)

IBM TotalStorage Productivity Center for Replication Basic Edition for System z is distributed with:

- International Program License Agreement (Z125-3301)
- License Information document (GI11-8982)
- Product tapes
- IBM TotalStorage Productivity Center for Replication Basic Edition on System z Program Directory (GI11-8981)

Security, auditability, and control

IBM TotalStorage Productivity Center for Replication for System z and IBM TotalStorage Productivity Center for Replication Basic Edition for System z use the security and auditability features of the operating system software. The customer is responsible for evaluation, selection,
and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

**Software Services**

IBM 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/

**IBM Tivoli Enhanced Value-Based Pricing**

The IBM TotalStorage Productivity Center products are priced using a managed-environment approach whereby price is determined by the amount of storage capacity under management rather than the number and type of product components installed.

This licensing model can provide the customer flexibility to deploy these software products within its environment in a manner that can address and respond to the customer's evolving architecture. That is, as the architecture of a customer's environment changes, the customer's implementation of these products can be altered as needed without affecting the customer's license requirements (as long as the customer does not exceed its entitlements to the software).

**Value-Based Pricing terminology definitions**

**IBM TotalStorage Productivity Center terabyte (TB) capacity:** A TB capacity is each individual terabyte of storage capacity managed by the IBM TotalStorage Productivity Center products. Managed capacity for IBM TotalStorage Productivity Center for Replication for System z is defined as the source device capacity. Only the source device capacity is included in this pricing definition (not the target device).

**TB:** One TB of managed storage; \((T/TB) = 2^{40}\) bytes = 1,099,511,627,776 bytes, or approximately a trillion bytes.

**Value Units**

A Value Unit is a pricing charge metric for program license entitlements which is based upon the quantity of a specific designated measurement used for a given program. Each program has a designated measurement. The most commonly used designated measurements are processor cores and MSU's. However, for select programs, there are other designated measurements such as Servers, users, client devices, and messages. The number of Value Unit entitlements required for your specific implementation of the given program must be obtained from a conversion table associated with the program. You must obtain a proof of entitlement (PoE) for the appropriate number of Value Unit entitlements for your implementation. The Value Unit entitlements of a given program cannot be exchanged, interchanged, or aggregated with Value Unit entitlements of another program.

**Product and licensing Web sites**

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

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

IBM Tivoli product licensing documents are available at Web site


**Pricing examples**

<table>
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<th>Usage Level</th>
<th>Cumulative</th>
<th>Min num</th>
<th>Max num</th>
<th>Value Units/TB</th>
</tr>
</thead>
<tbody>
<tr>
<td>VUE027</td>
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</table>

IBM is a registered trademark of International Business Machines Corporation
If you only plan to manage HyperSwap volumes on System z, you should order IBM TotalStorage Productivity Center for Replication Basic Edition for System z (5698-TRB) at no charge. There is a small fee per machine for service and subscription that covers support for one year. If you are interested in advanced copy services, in addition to HyperSwap, you would need to order the priced product, IBM TotalStorage Productivity Center for Replication for System z (5698-TPC). Refer to the scenarios below.

**Notes** for IBM TotalStorage Productivity Center for Replication for System z

- The Two Site feature is a prerequisite for the Three Site optional feature.
- It is not possible to order a number of TB for the Three Site optional feature that exceeds the number of TB ordered for the Two Site feature.

**Scenario 1:** Customer wants to manage 5 TB of storage capacity with IBM TotalStorage Productivity Center for Replication for System z, using either FlashCopy, Metro Mirror, or Global Mirror:

<table>
<thead>
<tr>
<th>Systems managed</th>
<th>TB quantity in customer environment</th>
<th>TB entitlements required</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 TB of IBM Total Storage Productivity Center for Replication for System z Two Site BC feature</td>
<td>5 TB</td>
<td>5 TB of IBM</td>
</tr>
</tbody>
</table>

**Scenario 2:** Customer wants to manage 10 TB of storage capacity using Metro Global Mirror with IBM TotalStorage Productivity Center for Replication Three Site BC feature and therefore needs 10 TB of the prerequisite TotalStorage Productivity Center for Replication Two Site BC feature:

<table>
<thead>
<tr>
<th>Systems managed</th>
<th>TB quantity in customer environment</th>
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<td>10 TB of IBM Total Storage Productivity Center for Replication for System z Two Site BC feature</td>
<td>10 TB</td>
<td>10 TB of IBM</td>
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</table>

**Scenario 3:** Customer wants to add license for 20 more TB to their existing license of 30 TB for TotalStorage Productivity Center for Replication for System z:

<table>
<thead>
<tr>
<th>Systems managed</th>
<th>TB quantity in customer environment</th>
<th>Additional TB entitlements required</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 TB of IBM Total Storage Productivity Center for</td>
<td>50 TB</td>
<td>20 TB of IBM</td>
</tr>
</tbody>
</table>
Scenario 4: Customer wants to perform Basic Hyperswap functions on System z using IBM TotalStorage Productivity Center for Replication Basic Edition for System z (5698-TRB):

- For each System z server running an active copy of IBM TotalStorage Productivity Center for Replication Basic Edition for System z, a copy of IBM TotalStorage Productivity Center for Replication Basic Edition for System z (5698-TRB) is required. If you are managing one or more sysplexes across one or more partitions or servers, where all active copies of IBM TotalStorage Productivity Center for Replication Basic Edition for System z are running on a single System z server, then one copy of IBM TotalStorage Productivity Center for Replication Basic Edition for System z (5698-TRB) is required.

- If you are managing multiple sysplexes across multiple servers and the active copies of IBM TotalStorage Productivity Center for Replication Basic Edition for System z are running on multiple System z servers, then one copy of IBM TotalStorage Productivity Center for Replication Basic Edition for System z (5698-TRB) is required for each System z server running an active copy of IBM TotalStorage Productivity Center for Replication Basic Edition for System z.

Ordering information

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

<table>
<thead>
<tr>
<th>Program number</th>
<th>Program name</th>
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<tbody>
<tr>
<td>5698-TPC</td>
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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 U.S. 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 Web site at http://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp

Basic license

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.

Current licensees: Current licensees of IBM TotalStorage Productivity Center for Replication for System z can order the new distribution medium via MES by specifying the desired distribution medium feature number.

New licensees: Orders for new licenses will be accepted now.
Shipment will begin on the planned availability date.

**Basic license: Ordering information for 5698-TPC and 5698-TRB non-MSU-based System z offerings**

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.

The ordering information for TotalStorage Productivity Center for Replication for System z (5698-TPC) is unchanged and is included here for your information only.

**Program name:** TotalStorage Productivity Center for Replication for System z  

**Program PID:** 5698-TPC

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**Subscription and Support PID:** 5698-S1A

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<th>Entitlement identifier</th>
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<td>S0140VX</td>
<td>Total Storage Productivity Center for Replication for System z Two Site BC</td>
<td>Basic ASC, per Value Unit SW S&amp;S no charge, decline SW S&amp;S</td>
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<tr>
<td>S0144F4</td>
<td>Multilingual</td>
<td>Hardcopy publication</td>
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<tr>
<td>S0140VZ</td>
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<td>Basic ASC, per Value Unit SW S&amp;S no charge, decline SW S&amp;S</td>
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**Program name:** TotalStorage Productivity Center for Replication Basic Edition for System z  

**Program PID:** 5698-TRB

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<th>Description</th>
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<tbody>
<tr>
<td>S0150HB</td>
<td>Total Storage Productivity Center</td>
<td>Basic OTC, per Machine</td>
</tr>
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</table>

IBM United States Announcement 208-076
Subscription and Support

Subscription and Support must be ordered to receive voice technical support via telephone during normal business hours, and future releases and versions, at no additional charge. The capacity of Subscription and Support (for example, Value Units or number of processors) must be the same as the capacity ordered for the product licenses.

To order, specify the Subscription and Support program product number 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 Support Maintenance (IAASM). This offering:

- Includes and extends the support services provided in the base support to include technical support via telephone during normal business hours.
- Entitles customers to future releases and versions, at no additional charge. Note that the customer is not entitled to new products.

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

Customization option for z/OS

Select the following feature number to customize your order if running on the z/OS platform. This feature can be specified on the initial or MES orders.

<table>
<thead>
<tr>
<th>Feature number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3450</td>
<td>Satellite Electronic Delivery</td>
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</tbody>
</table>

Customized Offerings

Product deliverables are shipped only via Customized Offerings (for example, CBPDO, ServerPac, SystemPac®).

CBPDO and ServerPac are offered for Internet delivery, where ShopzSeries product ordering is available. Internet delivery of ServerPac may help improve automation and software delivery time. For more details on Internet delivery, refer to the ShopzSeries help information at

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

Media type for this software product is chosen during the Customized Offerings ordering process. Based on your customer environment, it is recommended that the highest possible density tape media is selected. Currently offered media types are:

- CBPDOS — 3480, 3480 Compressed, 3490E, 3590, 3592*
- ServerPacs — 3480, 3480 Compressed, 3490E, 3590, 3592*
- SystemPacs — 3480, 3480 Compressed, 3490E, 3590, 3592*
3592 is highest density media. Selecting 3592 will ship the fewest number of media.

Once a product becomes generally available, it will be included in the next ServerPac and SystemPac monthly update.

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 inclusion in ServerPac.
- SystemPac shipments will begin four weeks after inclusion in SystemPac 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.

**Agreement for Acquisition of Software Maintenance:** The following agreement applies for 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.

S/390® and System z IBM Operational Support Services — SoftwareXcel is an option if you desire added services.

**License Information form number:** For IBM TotalStorage Productivity Center for Replication for System z:

- GC23-6310

For IBM TotalStorage Productivity Center for Replication Basic Edition for System z:

- GI11-8982

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


**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
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.

**Authorization for use on home/portable computer:** You may not copy and use this program on another computer without paying additional license fees.

**Other terms**

**Volume orders (IVO):** No

**IBM International Passport Advantage Agreement**

**Passport Advantage applies:** No

**Usage restriction:** Yes. Usage is limited to the quantity of Value Units or machines licensed.

For additional information, refer to the License Information document that is available on the IBM Software License Agreement Web site


**Software Maintenance applies:** No. For operating system software, the revised IBM Operational Support Services — SoftwareXcel offering will provide support for those operating systems and associated products that are not available with the newly announced Software Maintenance offering.

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

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

**IBM Operational Support Services — SoftwareXcel:** Yes

**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.

<table>
<thead>
<tr>
<th>Program number</th>
<th>Program name</th>
<th>Terms</th>
<th>Parent, if applicable</th>
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<tbody>
<tr>
<td>5698-TPC</td>
<td>TotalStorage Productivity Center for Replication for z/OS</td>
<td>Execution based</td>
<td>NA</td>
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<td>5698-TRB</td>
<td>TotalStorage Productivity Center for Replication for z/OS</td>
<td>None</td>
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**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


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.

**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 Customer Initiated Upgrade and IBM eServer On/Off Capacity on Demand — Software (Z125-6611), must be signed prior to use.

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**IBM Electronic Services**

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a Web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

http://www.ibm.com/support/electronic
Information on charges is available at Web site

http://www.ibm.com/support

In the Electronic tools category, select the option for Purchase/upgrade tools.

**Pricing for 5698-TPC and 5698-TRB non-MSU-based System z offerings**

The pricing ordering information for TotalStorage Productivity Center for Replication for System z is not changed with this announcement and is included here for your information only. With V3.4, you could save up to 50% off previous list pricing for TotalStorage Productivity Center for Replication offerings.

**Program name: IBM TotalStorage Productivity Center for Replication for System z**

**Program PID: 5698-TPC**

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<tr>
<td>S0140G6</td>
<td>Total Storage Productivity Center for Replication for System z Two Site BC</td>
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**Subscription and Support PID: 5698-S1A**

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<td>S0140WX</td>
<td>Total Storage Productivity Center for Replication for System z Two Site BC</td>
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<td>Total Storage Productivity Center for Replication for System z Three Site BC</td>
<td>Basic ALC, per Value Unit SW S&amp;S no charge, decline SW S&amp;S</td>
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**Program name: IBM TotalStorage Productivity Center for Replication Basic Edition for System z**

**Program PID: 5698-TRB**

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<td>S0150HB</td>
<td>Total Storage Productivity Center for Replication Basic Edition for System z</td>
<td>Basic OTC, per Machine</td>
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**Subscription and Support PID: 5698-RB1**

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</table>

**Business Partner information**
If you are an IBM Business Partner — Distributor for Workstation Software acquiring products
from IBM, you may link to Passport Advantage Online for resellers where you can obtain
Business Partner pricing information. An IBM ID and password are required.

https://www.ibm.com/software/howt
obuy/passportadvantage/paoreseller

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Fax: 800-21 BM FAX (242-6329)
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Markham, Ontario
Canada
L3R 2Z1

Reference: LE001

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