IBM System Storage PPRC Manager V5.1 enhances z/OS automation tools with greater performance and usability

At a glance

PPRC Manager is a z/OS-based tool that is designed to significantly simplify the effort required to configure Count Key Data (CKD) PPRC environments and to create sets of jobs that can be used to operate on those environments. It provides support for a range of PPRC functions implemented on IBM® ESS, DS6000™, and DS8000™ subsystems including Metro Mirror (PPRC Synchronous mode), Global Copy (PPRC-XD mode), and Global Mirror. PPRC Manager does not support PPRC for OPEN system Logical Unit Numbers (LUNs).

Applications of PPRC Manager include:

- Data migrations to new IBM technology or to a new data center
- Creation of point-in-time copies of data
- Creation of simple Disaster Recovery environments using Metro Mirror (PPRC Synchronous mode), Global Copy (PPRC-XD mode), and Global Mirror environments

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: LE001).

Overview

PPRC (Peer-to-Peer Remote Copy) Manager V5.1 can be used to configure different types of PPRC environments and to create the jobs needed to manage those environments. It supports both basic PPRC configurations and Cascaded PPRC configurations. It does not provide support for multisite Metro/Global Mirror environments.

PPRC Manager can also be used to implement environments in which the PPRC pairs are only established for short times each day, or are used to implement a transient data transfer process as part of a point-in-time based Disaster Recovery strategy. What differentiates the implementation of these diverse applications is the selection of the individual PPRC processes that will be used and the timing of their use.

Using PPRC Manager

- The PPRC Manager configuration generation process uses an interactive Interactive System Productivity Facility (ISPF) dialog. The user supplies z/OS® device numbers, IBM Storage Subsystem models and serial numbers, and the physical PPRC connections. The PPRC Manager develops the configuration files and the jobs that are needed to manage the PPRC environment.
• Jobs that manipulate the state of a PPRC environment use a mix of technologies, including TSO commands, ICKDSF commands and high-performance load modules.
• Special programs and associated jobs are included that allow for easy synchronization with other jobs that depend on the state of the PPRC environment. For example, some processes can only start to execute when the data on the PPRC secondaries is the same as the data on the PPRC primaries while the pairs are operating in PPRC-XD mode.

Both the PPRC Manager and FlashCopy® Manager software program products use a common style of ISPF interface, operate in a very similar fashion, and are designed to complement each other. A user familiar with one of the offerings will find the other offering easy to learn and use.

Key prerequisites

z/OS V1.7, or later.

Refer also to the Hardware requirements and Software requirements sections.

Planned availability date

August 29, 2008

Description

This z/OS-based tool is designed to reduce the amount of information the user is required to specify in order to configure PPRC environments and to create sets of jobs that can be used to operate on those environments.

It supports PPRC operations on IBM ESS, DS6000 and DS8000 subsystems. PPRC Manager does not support PPRC for OPEN system LUNs.

Manipulation of the PPRC environment is done using batch jobs to enable creation of complex job streams that exploit existing job scheduler capabilities rather than requiring development of complex automation scripts. A point-in-time disk to tape business process would be constructed by sequentially executing one or two PPRC Manager created jobs, followed by a possibly variable number of disk to tape jobs operating in parallel, followed by one or two PPRC Manager-created jobs that execute when all of the disk to tape copy jobs have successfully completed. Job schedulers are designed to simplify creation of complex job streams and PPRC Manager is designed to help installations take advantage of that capability.

Using PPRC Manager

• PPRC Manager uses ISPF dialogs to define the PPRC configuration and to create the jobs that can be used to operate on that environment.
• The PPRC device selection process is done based on IBM Storage Subsystem model, Serial number and z/OS device number. This makes it possible to create PPRC configurations in which the PPRC primary device numbers and the PPRC Secondary device numbers are the same. This device numbering technique works especially well when the PPRC Primary and Secondary devices are not attached to the same CPU. This approach offers two advantages. First, it eliminates half the number device numbers required; second, it allows the storage parts of operational procedures for the disaster recover site to be the same as those for the production site, which simplifies documentation updates and improves accuracy over time.
• The PPRC path specifications are based on physical connections to the IBM Storage Subsystem. This approach has been shown to significantly reduce the errors in path specification when SAIDs are used. In addition, this approach typically better matches documentation of the cable drawings used in the data center.
• Almost all of the jobs that modify the state of PPRC relationships have three PPRC steps:
  a. Collect PPRC status before the change,
  b. Make the change
  c. Collect status after the change
Collecting status before the change captures data needed to quickly understand why the changes may have not been successful. Collecting PPRC status after the change provides information on the final PPRC state and the last status step will be completed when the change has completed. If the change was to establish PPRC pairs, the status after step will be completed when the pairs have been established -- which may be significantly after the requested state changes were initiated.

- Two special status tracking programs are included. The first checks PPRC-XD mode pairs for Out-of-Sync Track (tracks waiting to be copied to the PPRC secondaries). When there are zero out of sync tracks, the program completes. This job enables synchronization of other processes to the point in time that the PPRC-XD Primaries and PPRC secondaries have exactly the same data on them. The second program will check for Active pair status when the PPRC Pairs are running in Synchronous mode. If a FlashCopy operation was done in which the target was a PPRC primary, the FlashCopy operation will have changed the PPRC pair state to Duplex Pending state. This job enables synchronization of other processes to the point in time that the PPRC Pairs are operating in Active pair status.

- Global Mirror is an IBM technology that couples PPRC with FlashCopy to implement a disaster recover solution. The Global Mirror function is a management layer that operates on top of a PPRC-XD environment and a FlashCopy environment. PPRC Manager provides a set of layers of ISPF panel dialog functions that allow the user to define the Global Mirror configuration and to create the PPRC jobs that will operate on it. FlashCopy Manager is required to create the FlashCopy processes required by Global Mirror, when PPRC Manager was used to create the PPRC portion of the environment.

PPRC Manager and FlashCopy Manager, its companion program product, provide z/OS batch jobs that are designed to supplement strategic IBM business continuity automation tools such as z/OS TPC for Replication and GDPS®.

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 System Storage™ PPRC Manager V5 is capable as of August 29, 2008, when used in accordance with associated IBM 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 US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested via the IBM Web site

http://www-03.ibm.com/able/product_accessibility/index.html

Product positioning

The FlashCopy Manager and PPRC Manager are tools designed to be a supplement to strategic IBM Business Continuity automation offerings such as GDPS, GDPS HyperSwap™ Manager, and other tools.

Such tool are typically used when specific services, functions, or configurations are needed, that the strategic Business Continuity automation tools are not designed to provide. Examples of these specialized needs include:

- Point-in-time FlashCopy performance enhancements
- Technology migrations from non-IBM copy services to IBM copy services
- Data center migrations
- Disk subsystem reconfiguration, with associated data movement
- Ability to integrate and exploit IBM Advanced Copy Services into the production z/OS batch environment, using existing z/OS job schedulers
The PPRC Manager tool is typically used as a supplemental tool in z/OS to TPC for Replication or GDPS, when a z/OS IBM Storage client requires:

- Technology migration: An affordable z/OS tool to enable an operational migration from non-IBM z/OS storage replication to IBM PPRC technology on the DS8000, DS6000, or ESS, especially for one-time migration events.
- When, compared to non-IBM point-in-time disk copy services, one or more of the following are needed:
  - Data migration: An affordable z/OS tool to enable large scale z/OS data migration from IBM storage to other IBM storage. For example, ESS to DS8000, older DS8000 to new DS8000, especially for one-time events.
  - A unique set of z/OS tools to supplement GDPS or z/OS TPC for Replication, that can accelerate and automate the data collection, definition, setup, testing, and integration of IBM Metro Mirror, Global Copy, Global Mirror, Metro/Global Copy, or Metro/Global Mirror into any z/OS production and batch environment
  - An affordable z/OS-only enablement tool where the requirement is only for lower criticality BC Tier 1-4 remote point in time recovery (that is, periodic point-in-time copy for disaster recovery at remote site)
  - A z/OS-familiar ISPF interface for using PPRC technology

IBM offers various solutions that can be used for physical data migration. Two major z/OS options are:

1. Softek Data Mobility software - z/OS software that moves the data between z/OS-attached storage through the System z™ server, using z/OS server cycles.
2. PPRC Manager

Physical data migration using Softek Data Mobility software is typically used to migrate z/OS data when the requirements include:

- Need to do physical z/OS data migration between different storage vendors (for example, between EMC and IBM or between Hitachi and IBM)
- Need for dynamic data switch
- Whenever IBM to IBM data migration using System z server cycles is preferred

And it is:

- Acceptable for client to install z/OS Softek software on all participating z/OS images
- Acceptable to migrate physical data in stages over time, as there is a limit on the number of concurrent volumes that can be migrated.

PPRC Manager is typically used to physically migrate z/OS data when the requirements include:

- Need to migrate physical z/OS data between IBM storage hardware such as DS8000, DS6000, and ESS -- typically, a technology migration from older IBM storage subsystems to newer IBM storage subsystems
- Need for shortest time window to achieve large scale IBM to IBM physical data migration
- Need to avoid manpower, time, expense required for an installation and qualification test cycle for install software in a production z/OS environment
- Need to avoid z/OS server cycle usage and real memory requirements for using z/OS software-based physical data migration
- When the requisite IBM storage subsystem Remote Copy, Metro Mirror or Global Mirror licenses, and requisite storage network infrastructure, are already in place and can be readily used

And it is:
• Acceptable for customer to install (or use existing) Metro Mirror or Global Mirror microcode licenses on all participating z/OS storage
• Acceptable to have a short outage when the cutover is made

Reference information

For information regarding the companion product, FlashCopy Manager V5.1, refer to Software Announcement 208-242, dated August 26, 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).


Program number

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Education support

No classes are scheduled specifically for this tool. IBM offers standard implementation classes on Peer to Peer Remote Copy.

More information is available at

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

or at

http://www.ibm.com/training

Search on PPRC.

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

Offering Information

Product information is available via the Offering Information Web site

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

No hardcopy publications are shipped with this product.

The following publication

<table>
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<tr>
<th>Title</th>
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<tbody>
<tr>
<td>IBM System Storage</td>
<td>G325-2633</td>
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<tr>
<td>PPRC Manager</td>
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<td>User’s Guide</td>
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will be available at no charge from 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.

Note: For new orders, the product Program Directory is shipped with the program package. Refer to the new order Packaging section.

Technical information

Specified operating environment

Hardware requirements
This program runs only on System z processors with z/OS 1.7, or later.

Software requirements
z/OS 1.7, or later, is required.

Interactive System Productivity Facility (ISPF) at any current supported level is required.

Either the REXX™ run Time library or the REXX Alternate Library at any current supported level is required.

Additionally, companion tools such as GDPS, GDPS HyperSwap Manager, or IBM Tivoli® z/OS Productivity Center for Replication, must be purchased separately, if required for the user application.

To implement a Global Mirror environment that uses both PPRC and FlashCopy functions, using FlashCopy Manager and PPRC Manager, both of these tools would be required.

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.

Performance considerations
PPRC Manager can provide significant performance improvements relative to standard management tools used today.

Planning information

Packaging
The following are shipped with new orders of IBM System Storage PPRC Manager Version 5.1:
• IBM System Storage PPRC Manager V5.1.0 product tape **
• IBM System Storage PPRC Manager V5.1.0 Program Directory (Gl11-2905)
• License Information for IBM System Storage Peer-to-Peer Remote Copy (PPRC) Manager Version 5 Release 1 Modification 0 (L-WSMH-7DPPNZ), (GC53-1129)

** Both CBPDO tape and direct electronic download are options of the ShopzSeries order process.

Refer to Ordering information for supply order numbers.

The IBM System Storage PPRC Manager User's Guide, G325-2633, should be downloaded from the IBM Publications Center prior to product installation. Refer to the Publications section.

This product will be available via CBPDO beginning September 5, 2008.

Security, auditability, and control

IBM System Storage PPRC Manager V5.1 uses the security and auditability features of the host System z hardware and 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

Charge metric

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<tr>
<td>IBM System Storage PPRC Manager V5.1</td>
<td>5635-PPM</td>
<td>per Site **</td>
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** Site definitions for non-Parallel Sysplex and Parallel Sysplex® System z installations vary. Refer to Ordering information and Prices sections.

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
To order, specify the program product number and the appropriate license or charge option. Also, specify the desired distribution medium.

Program Name: IBM System Storage PPRC Manager V5  
Program PID: 5635-PPM

Basic license one-time charge

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Orderable supply ID  Language  Distribution medium

S0142w2                English     3480 Tape

Subscription and Support PID: 5635-PPN

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Orderable supply ID  Language  Distribution medium

S0155RJ                English     Hardcopy

**Basic license**

**System z Site definitions**

- For the purposes of licensing IBM FlashCopy Manager and IBM PPRC Manager only, "Site" is defined as the standard distance capability of the System z Parallel Sysplex. If the primary and secondary systems are within the standard distance capability of the System z Parallel Sysplex (currently 100KM using the Server Timer Protocol), then this counts as one site, and only one PPRC Manager license is required.

- If the primary and secondary systems in a System z Parallel Sysplex are installed further apart than the defined standard distance capability, separate licenses are required for each system installation of PPRC Manager.

Note that due to the one-time migrational usage and toolkit nature of these program products, this definition of "site" for licensing purposes is specific to IBM FlashCopy Manager and IBM PPRC Manager. This definition of "site" does not apply to the licensing for any other IBM program products.

ShopzSeries download and CBPDO options are available.

**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](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

GC53-1129

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

http://techsupport.services.ibm.com/guides/handbook.html

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.

Volume orders (IVO)
No

Passport Advantage applies
No

Usage restriction
Yes

You are authorized to use the program to manage the Peer-to-Peer Remote Copy (PPRC) function on an IBM TotalStorage® Enterprise Storage Server® Model 800, IBM TotalStorage Enterprise Storage Server F20, IBM System Storage DS6000, and IBM System Storage DS8000.

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.

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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

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**Prices**

Pricing information is available through the configurator. For pricing information, confer with your Storage or System z IBM representative.

Information on charges is available at

http://www.ibm.com/support

Choose the option entitled Purchase/upgrade tools.

**Program Name:** IBM System Storage PPRC Manager V5  
**Program PID:** 5635-PPM

Basic license one-time charge
## Order now

To order, contact the Americas Call Centers, your local IBM representative, or your IBM Business Partner.

Identify your local IBM representative or IBM Business Partner, call 800-IBM-4YOU (426-4968).

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Fax: 800-IBM-FAX (426-6329)  
Internet: callserv@ca.ibm.com  
Mail: IBM Teleweb Customer Support  
ibm.com® Sales Execution Center, Americas North  
3500 Steeles Ave. East, Tower 3/4  
Markham, Ontario  
Canada  
L3R 2Z1

Reference: LE001

The Americas Call Centers, our national direct marketing organization, can add your name to the mailing list for catalogs of IBM products.

**Note:** Shipments will begin after the planned availability date.

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