IBM Print Services Facility V4.3 for z/OS supports Advanced Function Presentation Architecture changes

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At a glance

This latest release, IBM® Print Services Facility™ V4.3, for z/OS® helps provide:

- Enhancements to AFP™ bar code processing to provide more flexibility in applications that use bar codes
- Continued enhancements to AFP architected color management capabilities
- New finishing options for applications sent to cutsheet printers so that users can take full advantage of cutsheet printer finishing capabilities and produce better professional-grade documents
- Enhancements to AFP Download Plus, a separately priced PSF feature, helps improve processing efficiency and control, reduce z/OS system resource utilization and provide additional information on jobs processed by AFP Download Plus
- Improved messages and error handling to improve quality and assist in diagnosing print processing errors

Overview

IBM is announcing a new release of its flagship production print product, Print Services Facility (PSF) V4.3 for z/OS. This latest release supports recent updates to the Advanced Function Presentation™ (AFP) industry architecture and makes these latest print standards available on z/OS. In addition, enhancements have been made to the AFP Download Plus separately priced feature of PSF and to the AFP Conversion and Indexing Facility (ACIF) separately priced feature of PSF.

Whether it is printing monthly statements, providing financial data, or displaying personal healthcare information, print and output is a mission-critical workload for many enterprises. Enterprise print and output can also account for a significant percentage of a company's overall cost of doing business. With PSF V4.3 for z/OS enterprise print and output can be a potential source of real dollar savings. For example, PSF for z/OS can help provide:

- Reduced overall labor costs through the use of automation
- Improved print asset utilization by connecting more applications to existing devices
- Minimized scheduling delays, reduced errors and wasted paper, and reduced reprints of "disappearing" jobs with end-to-end workflow management
- Improved timeliness with industry-leading print service levels, error recovery, diagnostics, defect support
• Increased competitive advantage with flexible delivery (such as workgroup, cutsheet, continuous form, black-and-white, color) and flexible operations (such as multiple data formats, scheduling options, and so on)

With PSF V4.3 for z/OS, IBM is building on its enterprise production print capabilities by enhancing its end-to-end, managed workflow used to deliver high-quality color and black-and-white printing on z/OS, with consistent results across a variety of devices that support this architecture.

PSF for z/OS is based on industry print standards. PSF V4.3 for z/OS incorporates the most recent AFP Architecture changes approved by the AFP Consortium. This print architecture provides consistent and device-independent color rendering across multiple color technologies and printer vendors. The AFP Color Consortium became an industry standards body in 2006, and was incorporated in 2009 as the AFP Consortium. The AFP Consortium, comprised of 40 vendor members and growing, strives to enhance the entire AFP architecture.

**Key prerequisites**

Refer to the Hardware requirements and Software requirements sections for details.

**Planned availability date**

**September 25, 2009**

**Description**

Print Services Facility (PSF) for z/OS offers exceptional versatility to help you manage your production print and output environment. PSF enables: automated print processes, system management of print files, attributes, and resources, as well as page-level error recovery, accounting, extensive diagnostics, and print process statistics. PSF sophistication, resilience, and diagnostics are unmatched by other print management systems.

PSF V4.3 provides the following capabilities:

• New bar code capabilities are available to support increasing use of bar codes in applications to provide mail optimization for postal savings, and to control automated workflows.

• Improved color management is optimized with the following enhancements:
  a. Color Conversion Color Management Resources (CMRs) can now pass through CMYK colors more easily.
  b. Indexed CMRs map indexed colors in the data to output device colors or colorant combinations enables easier migration of existing color applications to newer color printer technologies.
  c. Process colors can be specified as the default color in the data descriptor for a Graphics Object Content Architecture object, providing full color image reproduction in very high quality.

• New finishing options now allow applications to specify documents to be bound into booklets, or trimmed to a specified size required by the finished document.

• AFP Download Plus is now better: Improved performance and resource utilization, additional info in the AFPSTATS report, reduced TCP/IP commands, control over transmit recovery interval, sending error messages and separator pages to the receiver to better coordinate print production.

• New messages and error handling improve PSF quality and provide additional diagnostic information. An example is Composition Error Handling, providing capability to hold jobs on the spool when the print data requests a medium map that is not found in the Form definition.
Many significant enhancements have been made to the AFP Download Plus separately priced feature of PSF. Enhancements have also been made to the ACIF separately priced feature of PSF. ACIF can run on any z/OS system with or without PSF. These enhancements are as follows:

**AFP Download Plus**

- Optionally send Mixed Object Document Content Architecture™ data directly to the receiving system without storing it in a temporary file in the working directory.
- Change the transmission recovery interval with a new AFPPARMS control statement parameter.
- Send an error message data set to the receiver when errors stop transformation.
- Send the active PSF for z/OS separator pages to the receiver.

**ACIF**

- The COLORMAP parameter has been added to allow users to specify color mapping tables.
- The IDXCPGID, MVSINCV, and NOINCV values have been added to the EXTENSIONS parameter.
- New and updated messages.

**Accessibility by people with disabilities**

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at http://www.ibm.com/able/product_accessibility/index.html

**Product positioning**

PSF is the strategic mainframe production print solution of IBM, especially for businesses that require high-quality, high-volume output such as transaction statements, invoices, checks, insurance policies, direct mail pieces, and more. It also supports distributed printing to departmental IPDS™ printers where ensured delivery of every job and page is important.

PSF supports AFP Consortium approved AFP architecture changes. The AFP Consortium is an open industry standards body, comprised of vendors of color printers and color document composition software to help customers create and manage color applications with consistent color rendering.

**Hardware and software support services**

**SmoothStart/installation services**

IBM Installation Services can be provided for PSF at an additional cost. Contact your IBM sales representative or Business Partner for additional information.

IBM SmoothStart™ and Installation Services from IBM Global Services are not provided for this product.

**Program number**

<table>
<thead>
<tr>
<th>Program number</th>
<th>Program name</th>
</tr>
</thead>
<tbody>
<tr>
<td>5655-M32</td>
<td>IBM Print Services Facility V4.3 for z/OS</td>
</tr>
</tbody>
</table>
Technical information

Specified operating environment

Hardware requirements
IBM Print Services Facility (PSF) requires a host processor that accommodates the software environment.

PSF supports printing AFP printers that adhere to the IPDS specifications. Not all functions of PSF are supported by all IPDS printers. To use Color Mapping Resources (CMRs) with PSF V4.3, the IPDS printer must support the corresponding AFP Color Management Object Architecture according to published specifications.

Software requirements
PSF runs on:

- z/OS V1.9, or later, with supported levels of JES2 or JES3.

One of the following system programs is required:

- SMP/E element of z/OS
- SMP/E V3.4 (5655-G44), or later

The following functions of the z/OS Communications Server are required, depending upon the printer attachment:

- SNA Services for SNA-attached printers
- IP Services for TCP/IP-attached printers

One of the following is required to provide host fonts:

- Infoprint® Fonts for z/OS V1.1 (5648-E76), or later.
- AFP Font Collection for z/OS V2.1.1 (5648-B33), or later.
- The Compatibility Fonts optional feature of PSF, which does not contain euro support.
- Worldtype Fonts for AFP Print Servers optional feature of Infoprint Fonts for Multiplatforms (5648-E77), which contains a wide selection of TrueType and OpenType fonts.
- To use TrueType and OpenType fonts, you must have these:
  - A resource installer program, such as the Font Installer optional feature of Infoprint Fonts for Multiplatforms, or the InfoPrint® AFP Resource Installer (5639-EE2).
  - A product that supplies TrueType and OpenType fonts, such as the WorldType Fonts for AFP Print Servers optional feature of Infoprint Fonts for Multiplatforms.

PSF can successfully process resource access tables (RATs) created with either the IBM Font Installer or the InfoPrint AFP Resource Installer. However, a RAT created with the IBM Font Installer is not compatible with a RAT created with the InfoPrint AFP Resource Installer. Though the AFP Resource Installer can process a RAT created with the Font Installer and migrate it into the new format, the opposite is not true. When the Font Installer processes a RAT created with the AFP Resource Installer, it might lose the RAT information or an error might occur. Therefore, IBM recommends that you do not use the Font Installer once you have created a RAT with the AFP Resource Installer.

Compatibility
PSF V4.3 for z/OS is upwardly compatible with PSF V4.2, and earlier, with the following exceptions:
• PSF V4 for z/OS does not include the optional feature, Page Printer Migration Programs (PPMP), which is no longer supported. Customers currently using PPMP should migrate to the replacement product, Infoprint XT™ Extender for z/OS V1R1 (5655-J65). For additional information, contact your local IBM representative.

• The AFP API component of PSF/MVS V2.2 is no longer provided with PSF V4. It is functionally replaced by AFP Toolbox, program product 5655-A25. Customers using the PSF/MVS V2.2 API can continue to use their existing program modules on an as-is basis or migrate to AFP Toolbox.

• The IP PrintWay™ and NetSpool™ optional features are no longer available or supported. These optional features are functionally replaced by the Infoprint Server optional feature of z/OS. Customers who want the functionality of IP PrintWay and NetSpool should order the Infoprint Server optional feature of z/OS.

• The Enhanced ACIF feature of PSF is now a separately ordered and priced feature. A base PSF license is no longer required when ordering Enhanced ACIF.

Performance considerations

The performance of PSF and its attached printers is dependent upon availability and efficiency of memory, storage, DASD, and channel and network resources in the system configuration. It is also highly dependent upon the content of the print datastreams being processed. In general, data-intensive applications, such as those containing images, require more resources than applications containing plain text. If performance degradation is experienced, normal system performance analysis and tuning should be conducted before contacting IBM Service.

User group requirements

FITS Requirement MR0430082748

Planning information

Customer responsibilities

PSF interacts with JES printer definitions, and for communication with attached printers, with VTAM® and/or TCP/IP device definitions. Printers’ device definitions should be in place for JES, VTAM, and/or TCP/IP prior to installing PSF.

Installability

Sample startup procedures for PSF V4 will reference different fonts than those used in the startup procedures for PSF V2.2. Care should be taken not to replace any startup procedures with the new samples until they can be tested with your available font libraries.

Packaging

The PSF V4.3 base program and optional features are each shipped on separate tapes. No fonts are included on the PSF base tape. If the compatibility fonts are required, be sure to order the compatibility font optional, no-charge feature.

A program directory is shipped with each PSF feature that is ordered.

All publications are included on CD-ROMs in Bookmanager and PDF formats. These CD-ROMs are shipped with the base program. Terms and conditions for use of the machine-readable files are shipped with the files.

Security, auditability, and control

PSF uses the security features and programs of the z/OS operating systems. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.
Publications

The following advance publications are available now. To order, you can direct order or contact your IBM representative.

Refer to the IBM Publications Center Web site for more information about publication ordering.

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

<table>
<thead>
<tr>
<th>Title</th>
<th>Order number</th>
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</thead>
<tbody>
<tr>
<td>AFP Conversion and Indexing Facility User's Guide</td>
<td>S550-0436-02</td>
</tr>
<tr>
<td>AFP Fonts: Font Summary</td>
<td>G544-3810-03</td>
</tr>
<tr>
<td>InfoPrint Manager for AIX®: Procedures</td>
<td>G550-1066-01</td>
</tr>
<tr>
<td>PSF for z/OS: AFP Download Plus</td>
<td>S550-0433-03</td>
</tr>
<tr>
<td>PSF for z/OS: Customization</td>
<td>S550-0427-02</td>
</tr>
<tr>
<td>PSF for z/OS: Diagnosis</td>
<td>G550-0428-02</td>
</tr>
<tr>
<td>PSF for z/OS: Download for z/OS Guide</td>
<td>S550-0429-02</td>
</tr>
<tr>
<td>PSF for z/OS: Introduction</td>
<td>G550-0430-02</td>
</tr>
<tr>
<td>PSF for z/OS: Licensed Program Specifications</td>
<td>G550-0431-02</td>
</tr>
<tr>
<td>PSF for z/OS: Messages and Codes</td>
<td>G550-0432-02</td>
</tr>
<tr>
<td>PSF for z/OS: Security Guide</td>
<td>S550-0434-02</td>
</tr>
<tr>
<td>PSF for z/OS: User's Guide</td>
<td>S550-0435-02</td>
</tr>
</tbody>
</table>

1Refer to the "Using AFP Upload" chapter of this guide.

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., Canada, 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


Current licensees

Current licensees of IBM Print Services Facility V4.2 for z/OS must order this release via MES.

Ordering instructions are scheduled to be mailed from IBM Software Delivery and Fulfillment to all current licensees by (month day, year). You cannot continue to order V4.2.

New licensees

Orders for new licenses can be placed now.

Registered customers can access IBMLink™ for ordering information and charges.

Shipment will not occur before the availability date.

Unless a later date is specified, orders entered before the planned availability date will be assigned a schedule date of one week following availability.

Orders entered after the planned availability date will be assigned a schedule date for the week following order entry, unless a later date is specified.
Shipment will begin on the planned availability date. New users of PSF V4.3 for z/OS should specify:

- Machine type: 5655
- Model: M32

Based on the customer-requested arrival date (CRAD) and to allow for order processing, the first customer shipment will begin within seven business days after general availability.

**Basic license**

PSF V4 is priced in Cumulative Block Tiers. The PSF Tier is determined based on the number of printers PSF will be driving, and the impressions-per-minute rated speed of those printers. Printer points are assigned to each printer based on its rated speed. Points for all printers except those in Category 1 are accumulated, and the total number of points indicates the appropriate PSF price tier.

Printer speeds and associated Printer Points are shown in an exhibit to the IBM System z® Software Contracts: Print Services Facility (PSF) Intelligent Printer Data Stream™ Printer List at


**How to order**

**Canada only**

To order a basic license, specify Program number 5655-M32 and feature number 9001 for asset registration. Specify the 3480 Supply IDs, MLC entitlement identifiers, and desired tiers (usage levels). For example, to order usage for Tier 3, order by specifying the features for Tier 1, Tier 2, and Tier 3.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Printer points</th>
<th>MLC entitlement</th>
<th>3480 supply ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 to 5</td>
<td>S01254B</td>
<td>S01254H</td>
</tr>
<tr>
<td>2</td>
<td>6 to 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10 to 14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>15 to 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>21 to 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>31 to 46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>47 to 66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>67 to 86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>87 to 151</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>152 to 301</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>302 to 601</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>602 and up</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To order optional priced features of PSF Version 4.3 for z/OS, specify the 3480 supply ID and MLC entitlement identifier for each feature you wish to order from the table below:

<table>
<thead>
<tr>
<th>Feature name</th>
<th>MLC entitlement</th>
<th>3480 supply ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFP Download Plus</td>
<td>S012551</td>
<td>S01254X</td>
</tr>
<tr>
<td>AFP Upload</td>
<td>S012545</td>
<td>S01254M</td>
</tr>
<tr>
<td>Compatibility Fonts</td>
<td>S012577</td>
<td>S012554</td>
</tr>
<tr>
<td>Enhanced ACIF</td>
<td>S012556</td>
<td>S01254K</td>
</tr>
<tr>
<td>MVS Download</td>
<td>S012555</td>
<td>S01254Z</td>
</tr>
</tbody>
</table>

**Note:** AFP Download Plus, AFP Upload, Compatibility Fonts, and Download for z/OS require Tier 1.
Caribbean countries

To order a basic license, specify Program number 5655-M32 and feature number 9001 for asset registration. Specify the 3480 tape feature number and MLC feature numbers for the desired tiers (usage levels). For example, to order usage for Tier 3, order by specifying the features for Tier 1, Tier 2, and Tier 3.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Printer points</th>
<th>MLC</th>
<th>3480 tape</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 to 5</td>
<td>J2GE</td>
<td>5802</td>
</tr>
<tr>
<td>2</td>
<td>6 to 9</td>
<td>J2GF</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10 to 14</td>
<td>J2GG</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>15 to 20</td>
<td>J2GH</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>21 to 30</td>
<td>J2GJ</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>31 to 46</td>
<td>J2GK</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>47 to 66</td>
<td>J2GL</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>67 to 86</td>
<td>J2GM</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>87 to 151</td>
<td>J2GN</td>
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<td>10</td>
<td>152 to 301</td>
<td>J2GP</td>
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</tr>
<tr>
<td>11</td>
<td>302 to 601</td>
<td>J2GQ</td>
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</tr>
<tr>
<td>12</td>
<td>602 and up</td>
<td>J2GR</td>
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</table>

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<tr>
<th>Feature name</th>
<th>MLC</th>
<th>3480 tape</th>
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<td>AFP Download Plus</td>
<td>J2HL</td>
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<tr>
<td>AFP Upload</td>
<td>J2HJ</td>
<td>5822</td>
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<tr>
<td>Compatibility Fonts</td>
<td>J2QQ</td>
<td>5852</td>
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<tr>
<td>Enhanced ACIF</td>
<td>J2HQ</td>
<td>5812</td>
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<tr>
<td>MVS Download</td>
<td>J2HN</td>
<td>5842</td>
</tr>
</tbody>
</table>

**Note:** AFP Download Plus, AFP Upload, Compatibility Fonts, and Download for z/OS require Tier 1.

**Single version charging**

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

**Customization options**

Select the appropriate feature numbers to customize your order to specify the delivery options desired. These features can be specified on the initial or MES orders.

**Expedite shipments**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>3445</td>
<td>Local IBM Office Expedite for IBM use only</td>
</tr>
</tbody>
</table>

A memo and program directory are shipped with the base feature. An additional program directory is shipped with each optional feature. The following publications are shipped in softcopy with the base feature and may be ordered separately in hardcopy for a fee:
Refer to the "Using AFP Upload" chapter of this guide.

Refer to the IBM Publications Center Web site for more information about publication ordering

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

The following publications are shipped in softcopy with the base feature:

<table>
<thead>
<tr>
<th>Title</th>
<th>Order number</th>
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<tbody>
<tr>
<td>Tiered Pricing Exhibit for IBM and Non-IBM AFP Printers</td>
<td>Z125-4564</td>
</tr>
</tbody>
</table>

To access the latest Print Services Facility for z/OS V4.3 (5655-M32) information, refer to

http://www-03.ibm.com/systems/z/zos/printsoftware/psfhome_z_ww.html

To access the latest Print Services Facility for z/OS V4.3 tiered pricing exhibit, refer to


**Licensed documentation**

Subsequent updates (technical newsletters or revisions between releases) to the publications shipped with the product will be distributed to the user of record for as long as a license for this software remains in effect. A separate publication order or subscription is not needed.

**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 terms for IBM Print Services Facility V4, as previously announced in Software Announcement A05-1571, dated October 25, 2005, licensed under the IBM Customer Agreement are unaffected by this announcement.

**IBM operational support services - SupportLine**

Yes

**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


**Prices**

Prices are subject to change without notice.

GST, QST, and sales taxes, where applicable, are extra.
For additional information and current prices, contact your local IBM representative.

Program number

5655-M32

<table>
<thead>
<tr>
<th>Entitlement Identifier</th>
<th>Description</th>
<th>License option/Pricing metric</th>
</tr>
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<tbody>
<tr>
<td>S01254B</td>
<td>PSF V4 for z/OS</td>
<td>Basic MLC</td>
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<tr>
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<td>Cumulative Block Tiers</td>
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<td>AFP Download Plus</td>
<td>Basic MLC</td>
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<td>Flat Charge</td>
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<td>S01254M</td>
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<td>Basic MLC</td>
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<td>Flat Charge</td>
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