IBM Data Integration Facility V2.2 adds JVM 1.6 support to enable common messaging across the enterprise

Overview

IBM® Data Integration Facility (DIF) is a Java™ application and toolkit, which enables integration of POS data to targeted destinations across the enterprise. DIF is installed on a 4690 POS controller and consists of a programmer’s application programming interface (API) and a run-time process. DIF allows access to POS data through point-to-point intra-store communication, once-only assured delivery, response to queries from remote systems, and communication between legacy terminals and other in-store devices using standard messaging structures.

DIF helps retailers improve the customer shopping experience with near-real-time visibility of transaction data. It facilitates streamlining operations and reductions in operational costs by using a variety of open-standard formats to share data between applications.

IBM Data Integration Facility V2.2 still embeds the micro broker component of IBM Lotus® Expeditor product, which allows DIF to communicate with message-oriented middleware. Micro broker is an edge-of-the-network, lightweight messaging hub. DIF uses micro broker’s point-to-point capabilities. DIF accepts message senders and receivers directly, and can forward those messages using micro broker bridging capability. This bridging capability can be configured by DIF to connect with IBM Lotus Expeditor micro broker, IBM WebSphere® MQ, or IBM WebSphere Message Broker.

Data Integration Facility V2.2 is now decoupled from ACE, minimizing the impact of updates and new installations.

Data Integration Facility V2.2 now includes support for JVM 1.6, allowing retailers to embrace edge-of-the-network technology to enable common messaging across the enterprise and leverage the latest software technologies.
Secure Data Access Writer is now a supported function with DIF V2.2. This allows a retailer to remotely and securely update a part of a file or record.

**Key prerequisites**

Refer to the Technical information section for details.

**Planned availability date**

November 30, 2012

**Description**

DIF connects store and enterprise processes by providing Java and non-Java applications (including CBASIC applications) with easy-to-use interfaces for:

- Message-oriented middleware (IBM WebSphere MQ, IBM WebSphere Message Broker, and IBM Lotus Expeditor) using Java Message Service (JMS) messaging standard
- Communication between legacy terminals and other in-store devices using Extensible Markup Language (XML), Simple Object Access Protocol (SOAP), or JMS-based messaging

DIF provides support for transforming 4690 sales data into standards-based XML. For example, transaction data can be converted from native binary format to International XML Retail Cooperative (IXRetail) standard POSLog XML documents. Transactions can 'trickle' in near-real time from the store to host systems. Additionally, DIF's TLOG trickle solution will continue to support message pacing and message bundling; and each transaction from TLOG trickle is delivered one time.

The DIF run-time process is a Java-based background application that serves as a messaging hub for the store. It allows non-Java applications, such as CBASIC or C applications, to communicate with message systems such as IBM WebSphere MQ, IBM WebSphere Message Broker, or IBM Lotus Expeditor. Examples include:

- Integration of 4690 sales and checkout support with micro broker for trickling transaction data in near-real time to message-oriented software enables a CBASIC terminal application to send requests to the DIF run-time process over a 4690 pipe.
- The run-time process also allows external applications to communicate with the store. For example, host systems can send queries to the store to retrieve store-based data, such as data in 4690 keyed files.

**Accessibility by people with disabilities**

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


**Program number**

<table>
<thead>
<tr>
<th>Program number</th>
<th>VRM</th>
<th>Program name</th>
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</thead>
<tbody>
<tr>
<td>5639-GG5</td>
<td>V2.2.0</td>
<td>IBM Data Integration Facility</td>
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</table>
Product identification number

<table>
<thead>
<tr>
<th>Program PID number</th>
<th>Maintenance 1 year PID number</th>
<th>Maintenance 3 year PID number</th>
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</thead>
<tbody>
<tr>
<td>5639-GG5</td>
<td>5639-GG6 IBM DIF 1 Yr Reg/Renewal</td>
<td>5639-GG7 IBM DIF 1 Yr After Lic</td>
</tr>
<tr>
<td></td>
<td>5639-GG8 IBM DIF 3 Yr Reg</td>
<td>5639-GG9 IBM DIF 3 Yr Renew</td>
</tr>
<tr>
<td></td>
<td>5639-GH0 IBM DIF 3 Yr After</td>
<td></td>
</tr>
</tbody>
</table>

Education support

The following educational offerings are available for Business Partners and IBM representatives who sell or support Data Integration Facility. These are Internet-downloadable, self-study courses.

- Selling the IBM Store Integration Framework (RE3500)¹
- Data Integration Facility V2 Technical Education (RE3007)
- What You Should Know About Data Integration Facility V2 (RE3008)²

¹ Data Integration Facility sales education is found in the Selling the IBM Store Integration Framework course.

² RE3007 is a prerequisite to RE3008. RE3008 is a new course that will be available at product announce.

For course descriptions, or to enroll in these and other Retail Store Education courses, IBM employees and IBM Business Partner personnel should visit:

IBM employees

http://lt.be.ibm.com/smartzone

IBM Business Partners

http://www.ibm.com/partnerworld/pwu/systems/

The following training is available for customers who support the Data Integration Facility product:

- Data Integration Facility V2 Technical Education (RE3007C)
- What You Should Know About Data Integration Facility V2 Release 2 (RE3008)³

³ RE3007C is a prerequisite to RE3008. RE3008 is a new course that will be available at product announce.

For course descriptions, or to enroll in these and other Retail Education courses, customers should visit

http://www.ibm.com/services/weblectures/retailed

For questions about DIF education contact: grse@us.ibm.com

Offering Information

Product information is available via the Offering Information website

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

Displayable softcopy publications

IBM Data Integration Facility documentation is offered in displayable softcopy form on the Internet. Visit


1. Under Links, select Publications
2. Under Store Integration Framework, select DIF

• IBM Data Integration Facility User's Guide Version 2, GC30-4077

Technical information

Specified operating environment

Hardware requirements

Minimum controller hardware requirements

The minimum controller hardware requirements are selected to not only cover the runtime requirements of DIF but to also cover the other workloads that are likely to be running on the controller.

Currently DIF is running on some older or slower controller models. DIF continues to be able to run on these controllers at their current workloads. If additional DIF or store workload is to be added to the controllers, the controllers may need to be replaced with newer or faster controller models.

• 512 MB of disk space.
• Minimum controller processor speed is Intel\textsuperscript{TM} Celeron\textsuperscript{TM} 2000 (4690 processor performance rating of 500 and the processor in a 4800-722 and 4800-741/C41) or similar for legacy DIF users not intending to increase the controller workload.
• Recommended controllers for DIF workloads other than TLOG Trickle with POSLOG conversion are the 4800-743/C43, 4800-782 and the 4800-783 or faster controllers.
• 4800-784 with 2GB of RAM for TLOG Trickle with POSLOG conversion.
• 2 GB minimum RAM, recommended 4 GB or more for running DIF in the 1.6 JVM on a 4690 Enhanced Mode controller.
• 1 GB minimum RAM for running DIF in the 1.4.2 JVM on a 4690 Enhanced Mode Controller.
• 512 MB minimum RAM for running DIF in the 1.4.2 JVM on a 4690 Classic Mode Controller.
• Running TLOG trickle with POSLOG conversion uses 80 MB of address space on 4690 Classic and 155 MB of address space on 4690 Enhanced Mode. However, we need to take into account the requirements of other processes that are running on the controller and size the memory requirements for good overall controller performance.

Software requirements

Operating System supported:

• IBM 4690 Operating System V6.2 level 0CG3, or later, classic and enhanced

Product/Applications supported:

• IBM Remote Management Agent (RMA) - V2.6 Master Agent, or later
• IBM SurePOS\textsuperscript{TM} ACE and ACE/EPS - V7.1, or later
• IBM 4680-4690 General Sales Application (GSA), PID #5696-546, PTF P001, or later
• IBM 4680-4690 Supermarket Application (SA V2), PID #5696-536, PTF P001, or later

For current information and more details on specific product level requirements information, refer to the online Data Integration Facility User's Guide.

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

**Limitations**

The IBM Lotus Expeditor micro broker component code embedded in DIF V2.2 is for messaging with DIF application use only.

**Planning information**

**Packaging**

IBM Data Integration Facility is distributed with the following items when media is ordered:

- Proof of Entitlement (PoE) is no longer shipped with the product. The invoice should be used as Proof of Entitlement.
- One CD-ROM - LCD74530
- International Program License Agreement (IPLA) - Z125-3301
- The International Agreement for Acquisition of Software Maintenance - Z125-6011
- License Information (LI) - GC27-4115 (in hardcopy form)

**Security, auditability, and control**

IBM Data Integration Facility uses the security and auditability features of the IBM 4690 OS, which include authorization services (password) for each user. It also uses the security and auditability features of the POS application, such as operator authorization and control, ability to limit unique functions to specific terminals, and logging of significant events for audit purposes.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

**Global Technology Services**

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

Consult your IBM representative.

Charge metric

<table>
<thead>
<tr>
<th>Program name</th>
<th>Part number or PID number</th>
<th>Charge metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM DIF V2.2</td>
<td>5639-GG5</td>
<td>Per Store</td>
</tr>
</tbody>
</table>

Store

Store is a unit of measure by which the program can be licensed. For programs licensed in a web commerce environment, a store is a web enabled mercantile establishment deployed and accessible to customers through the web storefront and to administrators through the program. For programs licensed in a physical retail setting, a store is each physical mercantile establishment where goods and services are offered for sale. Licensee must obtain an entitlement for every store where the program is installed.

The Product Identification (PID) number for the initial base license of IBM Data Integration Facility V2.2 is 5639-GG5. The following is a description of each of the new feature numbers:

- Feature 0001 U9MNC1
  - DIF V2 Per Store with 1 Year SW Maintenance:
    This feature must be selected to order a base license for each store that DIF V2 will be running on. DIF V2 includes all the components of DIF. The quantity of feature number 0001 U9MNC1 ordered, **must** be equal to the number of stores.

- Feature 0002 U9MVC1
  - Trade-up from 5724-G56 DIF V1.1.0 (Passport Advantage®)
    Customer must be licensed and current on software maintenance support of DIF V1.1 in Passport Advantage to be eligible to order this feature. This feature must be selected if you want to upgrade from DIF V1.1.0 to DIF V2.2. The quantity of feature number 0002 U9MVC1 ordered, **must** be equal to the number of DIF V1.1.0 licenses that need to be upgraded.

- Feature 0003 XZS7C1
  - Trade-up from 5799-KBB V1.1.0 (AAS)
    Customer must be licensed and current on software maintenance support of DIF V1.1 PRPQ to be eligible to order this feature. This feature must be selected to migrate from DIF V1 (5799-KBB), which was orderable as a PRPQ. The quantity of feature number 0003 XZS7C1 ordered, **must** be equal to the number of DIF V1 licenses that need to be migrated.

Below represents how to order an initial base license for DIF V2. The econfig tool is available to help you create an DIF V2 order. If, for some reason, econfig is not available, you can place a basic order as follows:

- Order 5639-GG5 for the base license code
  - Select feature number 0001 U9MNC1 for the base software license
  - Select the quantity equal to the number of stores where the program is to be run
  - Select feature number 5809 for the media.
You must also include either the 1-year or 3-year Software Maintenance PID to register for Software Maintenance and to be entitled for Software Subscription and Support. Refer to the section on Software Maintenance for additional information.

5639-GG5 IBM Data Integration Facility V2

Basic license one-time charge

<table>
<thead>
<tr>
<th>Feature description</th>
<th>Feature number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIF V2 Per Store w/ 1 Year SW Maint</td>
<td>0001</td>
</tr>
<tr>
<td>DIF V2 Trade up fr/DIF V1 PA w/1 Year SW Maint</td>
<td>0002</td>
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<tr>
<td>DIF V2 Trade up fr/DIF V1 PRPQ w/1 Year SW Maint</td>
<td>0003</td>
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<tr>
<td>DIF V2 Per Store w/ 1 Year SW Maint</td>
<td>U9MNC1</td>
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<tr>
<td>DIF V2 Trade up fr/DIF V1 PA w/1 Year SW Maint</td>
<td>U9MVC1</td>
</tr>
<tr>
<td>DIF V2 Trade up fr/DIF V1 PRPQ w/1 Year SW Maint</td>
<td>XZS7C1</td>
</tr>
</tbody>
</table>

Customization options for 5639-GG5

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

Initial shipments

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3444</td>
<td>Serial Number Only (suppresses shipment of media and documentation)</td>
</tr>
<tr>
<td>3445</td>
<td>Local IBM Office Expedite (for IBM use only)</td>
</tr>
</tbody>
</table>

Expedite shipments

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3446</td>
<td>Customer Expedite Process Charge ($30 charge for each product)</td>
</tr>
</tbody>
</table>

Expedite shipments will be processed to receive 72-hour delivery from the time Delivery and Fulfillment (ISC) receives the order. ISC will then ship the order via overnight air transportation.

Software Maintenance for DIF

There are two options for Software Maintenance (SWMA) for DIF. You can choose either a one year or a three year option.

You must order Software Maintenance Registration with the initial order. It entitles the user to receive new versions or releases during the initial 12-month period, and also to receive support. It also registers them in the entitlement database, allowing them to open and report problems. If you do not include the Software Maintenance Registration PID with the initial order, it will not update the entitlement system to allow the user to get support.

Also, you must ensure that the number of base DIF licenses ordered matches the number of DIF software maintenance licenses. There should be a one-for-one match.

You do not need to order the SWMA Renewal the first year, since it is already included in the base license price of the package. This needs to be ordered once
the registration period has expired (after the first 12 months). It starts with year number 2 through the life of the installation.

Make sure you **always** order the latest announced Software Maintenance PID for DIF. The DIF Software Maintenance PID number will always be the same PID number for the life of DIF.

The following are the Software Maintenance Product Identification (PID) numbers for DIF V2.2:

- 5639-GG6 IBM Data Integration Facility One Year Software Maintenance Registration/Renewal
- 5639-GG7 IBM Data Integration Facility One Year Software Maintenance After License
- 5639-GG8 IBM Data Integration Facility Three Year Software Maintenance Registration
- 5639-GG9 IBM Data Integration Facility Three Year Software Maintenance Renewal
- 5639-GH0 IBM Data Integration Facility Three Year Software Maintenance After License

The following is a description of each of the feature numbers for DIF One Year Software Maintenance Registration/Renewal (5639-GG6):

- **Feature 0001 U9MPC2 DIF Per Store SWM No Charge Registration:**
  This feature must be selected when initially ordering the DIF base license code. It is a **no charge** feature that registers the user so they are entitled to their 12 months of software maintenance on the DIF base code. The total number of the quantity of the DIF Store software maintenance feature numbers ordered **must** be equal to the total number of the quantity of the DIF Store base license feature numbers ordered. It should be a one-for-one match.

- **Feature 0002 U9MPC3 DIF Per Store SWM One Year Renewal:**
  This feature must be selected for each DIF Store session that needs to be renewed before their 12-month no-charge software maintenance for the DIF base code is up for renewal. The quantity of the DIF store feature numbers ordered **must** be equal to the number of DIF store license feature numbers ordered. It should be a one-for-one match.

The following is a description of each of the feature numbers for the DIF Software Maintenance One Year After License (5639-GG7):

- **Feature 0001 U9MRC4 DIF Per store SWM One Year After License:**
  This feature must be selected when a user has let their DIF software maintenance lapse. This can happen by either a user not ordering software maintenance after the initial 12-month registration period is over or a user forgetting to renew their software maintenance. The total number of the quantity of the DIF Store one year after license feature numbers ordered **must** be equal to the total number of the quantity of the DIF store base license feature numbers ordered. It should be a one-for-one match.

The following is a description of the feature number for DIF Software Maintenance Three Year Registration (5639-GG8):

- **Feature 0001 U9MSC5 DIF per store SWM Registration:**
  This feature must be selected when initially ordering the DIF base license code. It is a feature that registers the user so they are entitled to free support their first 12 of the 36 months of software maintenance on the DIF base code. The total number of the quantity of the DIF software maintenance feature codes ordered **must** be equal to the total number of the quantity of the DIF base license feature numbers ordered. It should be a one-for-one match.
The following is a description of the feature number for DIF Software Maintenance Three Year Renewal (5639-GG9):

- Feature 0001 U9MTC6 DIF per store SWM Three Year Renewal:
  This feature must be selected for each DIF store that needs to be renewed before their first 12 months of software maintenance for the DIF base code is up for renewal. The quantity of the DIF renewal feature numbers ordered must be equal to the number of DIF base license feature numbers ordered. It should be a one-for-one match.

The following is a description of the feature number for the DIF Software Maintenance Three Year After License (5639-GH0):

- Feature 0001 U9MUC7 DIF Per store SWM Three Year After License:
  This feature must be selected when a user has let their DIF software maintenance lapse. This can happen by either a user not ordering software maintenance after the initial 12-month registration period is over or a user forgetting to renew their software maintenance. The total number of the quantity of the DIF three year after license feature numbers ordered must be equal to the total number of the quantity of the DIF base license feature numbers ordered. It should be a one-for-one match.

5639-GG6 Software Maintenance Reg/Renewal, 1 Year

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<td>DIF per store SWM NoChg Registration</td>
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<tr>
<td>DIF Per store SWM Yr Renewal</td>
<td>0002</td>
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</tbody>
</table>

5639-GG7 Software Maintenance After License, 1 Year

<table>
<thead>
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<th>Feature description</th>
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<td>DIF per store SWM 1 Yr After License</td>
<td>U9MRC4</td>
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5639-GG8 Software Maintenance 3 year registration (2 year uplift)

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<td>DIF per store SWM 3 Yr Registration</td>
<td>U9MSC5</td>
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5639-GG9 Software Maintenance 3 year Renewal

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<th>Feature number</th>
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</thead>
<tbody>
<tr>
<td>DIF per store SWM 3 Yr Renewal</td>
<td>0001</td>
</tr>
</tbody>
</table>
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.

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IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use.

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

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The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) agreement applies for Subscription and Support (also referred to as Software Maintenance) and does not require customer signatures.

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. IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support (also referred to as Software Maintenance) can be extended by the purchase of a renewal option, if available. These programs have a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

License Information form number

GC27-4115

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


Limited warranty applies

Yes
**Limited warranty**

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the *IBM Software Support Handbook* found at

http://www.ibm.com/support/handbook

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

**Money-back guarantee**

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

**Volume orders (IVO)**

Yes. Contact your IBM representative.

**Passport Advantage applies**

No

**Software Subscription and Support applies**

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

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

http://www.ibm.com/support/handbook

Software Subscription and Support (Software Maintenance) does not include assistance for the design and development of applications, your use of programs in other than their specified operating environment, or failures caused by products for which IBM is not responsible under this agreement.

**System i Software Maintenance applies**

No
Variable charges apply
No

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

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

ESAP available
Yes, to qualified customers.

Statement of good security practices

IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered destroyed or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective. IBM does not warrant that systems and products are immune from the malicious or illegal conduct of any party.

Prices

For all local charges, contact your IBM representative.

Announcement countries

All European, Middle Eastern, and African countries except Turkey, Italy, Netherlands, Sweden.

If a country is listed above, then refer to Software Announcement ZP12-0432, dated November 27, 2012, for the announcement that applies to that country.

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