IBM XIV Storage System software version 11.4.0 for models 214 and 114 delivers encryption, scaling, and cloud management

At a glance

IBM® XIV® Storage System Gen3 software version 11.4.0 is designed to:

- Help secure your data with industry-standard encryption for data at rest on 1 TB, 2 TB, 3 TB, and 4 TB systems, and software-based, encryption-ready flash drives, while avoiding performance impact
  - AES 256-bit keys
  - Self-encrypting (SED) hard drives
  - Nondisruptively hot-encrypt your volumes in minutes
  - Key Management Interoperability Protocol (KMIP) version 1.0 support
  - Separate, centralized, and simplified key management through IBM Tivoli® Key Lifecycle Manager
- Improve your compute cloud with XIV open standards and integration support, including OpenStack Cinder, XIV RESTful API, IBM SmartCloud® Storage Access, and the new IBM Storage Integration Server
- Extend productivity and data protection using IBM Hyper-Scale Consistency to coordinate concurrently consistent snapshots across multiple XIV systems
- Benefit from superb performance as demonstrated by top XIV results in the Exchange Solution Reviewed Program (ESRP) for Microsoft™ Exchange 2013 on 120,000 mailboxes
- Protect your investment with VMware ESXi 5.5 and Windows™ 2012 R2 space reclamation support
- Quick-start synchronous mirroring with offline initialization, flexibly swapping between synchronous and asynchronous mirroring to meet various service level needs while lowering costs

Overview

IBM XIV Storage System Gen3 with software version 11.4.0 is designed to help secure data with industry-standard encryption for data at rest while avoiding performance impact.

With version 11.4, XIV Gen3 supports encryption for all capacity points.

- XIV systems are available with SED hard drives and software-based, encryption-ready flash cache
• XIV data-at-rest encryption is implemented with AES 256-bit keys
• Nondisruptively hot-encrypt SED-based XIV Gen3 systems in minutes
• KMIP version 1.0 support
• Manage your keys with IBM Tivoli Key Lifecycle Manager, which offers production-ready key management including:
  – Centralized and simplified key management
  – Separation of key storage from data storage

**Improve your cloud with XIV**

XIV is well-suited for cloud deployments. The grid design stripes data across all modules and spindles, incorporating data redundancy for consistent and predictable I/O performance that is always load balanced. XIV grid architecture also enables autonomous, and fast fault recovery. XIV architecture is space-efficient and supports space reclamation. To scale-out, XIV supports IBM Hyper-Scale Mobility and HyperScale Consistency for scale out needs. To secure cloud storage, XIV data-at-rest encryption is implemented with AES 256-bit keys, and SED drives. With XIV deep cloud integration customers can:

• Automate storage discovery and provisioning in OpenStack environments using OpenStack Cinder integration
• Automate custom storage operation using the new XIV RESTful API:
  – Integration of XIV-native custom cloud with monitoring and provisioning
  – Delivered through IBM Hyper-Scale Manager
  – Empower users with self-service volume provisioning through IBM SmartCloud Storage Access
• Deploy the new IBM Storage Integration Server to support:
  – Multiple deep VMware integration solutions on a single host or virtual machine
  – VMware integration of multiple IBM storage arrays through one console
  – Enable self-service provisioning and IBM-native storage visibility with the new VMware vSphere web client plug-in
  – Enable profile-based provisioning and automated storage placement through VASA Provider

**Extend productivity and data protection with new IBM Hyper-Scale Consistency**

IBM scales XIV snapshot management out with the new Hyper-Scale Consistency, by coordinating concurrent snapshots of volumes that are spread across multiple XIV systems and belong to one application

• Implementation of an enhanced command line that allows I/O operations of entire consistency groups to be stopped and resumed. When I/O is stopped, snapshots are taken near-instantly across all involved machines and consistency groups, to help provide a crash-consistent data set for the application. I/O is then resumed across all involved machines.

**Protect your investment with greater space reclamation support and flexible business continuity**

• Dynamically reclaim space with VMware ESXi v5.5 and Windows 2012 R2 space reclamation support, reducing thin-provisioning risk, and improving capacity efficiency and return on investment
• Quick-start synchronous mirroring with offline initialization, flexibly swapping between synchronous and asynchronous mirroring

**XIV 11.4 Key business value to customers**

• Help to secure information assets with industry-standard encryption for data at rest
- Deploy secure, robust, automated clouds with the latest open standards and integration support, including OpenStack and a RESTful API
- Improve scale-out data protection with Hyper-Scale Consistency
- Deliver a superb Microsoft Exchange user experience as reflected in top ESRP results for XIV performance with Exchange 2013

**Note:** IBM Tivoli Key Lifecycle Manager will be renamed on October 29, 2013, becoming IBM Security Lifecycle Manager. Refer to the Software Announcement listed in the Reference information section for more details.

### Key prerequisites

An order of a validly configured IBM XIV Storage System Gen3 machine type 2810 or 2812, Model 214 or 114, must occur at the same time as an initial IBM XIV Storage System software V11.4.0 order.

Refer to the Hardware requirements and Ordering information sections for more information.

### Planned availability date

November 15, 2013

### Description

IBM XIV Storage System Gen3 with software version 11.4.0 is designed to deliver following enhancements:

**Help secure data with industry-standard encryption for data at rest while avoiding performance impact**

With version 11.4, XIV Gen3 supports encryption for all capacity points:

- XIV systems are available with SEDs and software-based, encryption-ready flash cache
- XIV data-at-rest encryption is implemented with AES 256-bit keys
- Nondisruptively hot-encrypt XIV Gen3 systems in minutes
- KMIP version 1.0 support
- IBM Tivoli Key Lifecycle Manager offers production-ready key management, including:
  - Centralized and simplified key management
  - Separation of key storage from data storage

**Extend productivity and data protection with new IBM Hyper-Scale Consistency**

- IBM scales XIV snapshot management out with the new Hyper-Scale Consistency, by coordinating concurrent snapshots of volumes that are spread across multiple XIV systems and belong to one application.
- Implementation of an enhanced command line allows I/O operations of entire consistency groups to be stopped and resumed. When I/O is stopped, snapshots are taken near-instantly across all involved machines and consistency groups to help provide a crash-consistent data set for the application. I/O is then resumed across all involved machines.
**Improve your compute cloud with XIV cloud standards and integration support**

XIV is well-suited for cloud deployments. The grid design stripes data across all modules and spindles and incorporates data redundancy, resulting in consistent and predictable I/O performance that is always load balanced. XIV grid architecture also enables autonomous, and fast fault recovery. XIV architecture is designed to be space-efficient and supports space reclamation. To scale out, XIV supports IBM Hyper-Scale Mobility and HyperScale Consistency. To secure cloud storage, XIV data-at-rest encryption is implemented with AES 256-bit keys, and SEDs. With XIV deep cloud integration customers can:

- Automate storage discovery and provisioning in OpenStack environment using OpenStack Cinder integration
- Automate custom storage operation using the new XIV RESTful API
  - Integration of XIV-native custom cloud with monitoring and provisioning
  - Delivery through IBM Hyper-Scale Manager
- Empower users with self-service volume provisioning through IBM SmartCloud Storage Access
- Deploy the new IBM Storage Integration Server to support:
  - Multiple deep VMware integration solutions on a single host or virtual machine
  - VMware integration of multiple IBM storage arrays through one console
  - Self-service provisioning and IBM-native storage visibility through the new VMware vSphere web client plug-in
  - Profile-based provisioning and automated storage placement through VASA Provider

IBM Storage Integration Server is a new server software product that consolidates multiple integration functions on a single host or VM to support storage services from multiple IBM storage arrays and serving various target cloud environments.

- IBM Storage Integration Server provides common management features and extends a diverse set of integration functions that share a consistent management
- This first release of IBM Storage Integration Server supports VMware by providing a vSphere Web Client plug-in and a VASA Provider:
  - The vSphere Web Client plug-in allows self-service provisioning and IBM-native storage visibility for VMware administrators using the vSphere Web Client. The vSphere Web Client plug-in is the successor of the stand-alone IBM Storage Management Console for VMware vCenter.
  - The revamped VASA Provider is the successor of the former stand-alone VASA Provider, allowing profile-based storage provisioning and automated storage placement for XIV.

**Protect your investment with greater space reclamation support and flexible business continuity**

- Dynamically reclaim space with VMware ESXi v5.5 and Windows 2012 R2 space reclamation support, reducing thin provisioning risk and improving capacity efficiency and return on investment.
  - Deploy VMware 5.5 and Windows 2012 R2 with XIV support
  - XIV is certified to support new Windows Server 2012 R2 and VMware v5.5 hosts
- XIV supports dynamic space reclamation through the implementation of several SCSI commands, among which UNMAP is required to support VMware and Microsoft environments. XIV now adds support for Windows Server 2012 R2 and VMware ESXi v5.5, in addition to existing certified space reclamation support for Windows Server 2012. For version 10.2.4 and later, XIV supports dynamic space reclamation with Symantec Storage Foundation and Redhat Enterprise Linux™.
• Quick-start synchronous mirroring with offline initialization flexibly swaps between synchronous and asynchronous mirroring.
• Until now, XIV has supported offline initialization for asynchronous mirroring. With 11.4, IBM applies this capability to XIV synchronous mirrors:
  – Offline initialization establishes a faster initial replica of the master mirror volume on the slave system by locally using a recent replica onto the slave system, reducing the duration of online initialization across WAN lines and increasing operational flexibility
  – Customers can now swap between synchronous and asynchronous mirroring to address service-level and compliance needs, and reduce costs

Outstanding Exchange Solution Reviewed Program (ESRP) results for Microsoft Exchange 2013

• Benefit with Microsoft Exchange 2013 architecture with the new ESRP-validated IBM XIV Storage solution featuring two 4 TB XIVs, which is designed to achieve a record 2 GB mailboxes to 120,000 users, at 0.16 IOPS per mailbox, 24 mailbox servers, while operating at 88% capacity utilization.
• For more information, read the XIV ESRP performance document at http://www-03.ibm.com/support/techdocs/atsmastr.nsf/WebIndex/WP102331

Accessibility by people with disabilities

A US 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

IBM XIV Storage System software is the disk system operating software for IBM XIV Storage System Gen3 2810-214, 2810-114 and 2812-214, 2812-114. This software provides the functional capabilities of the XIV system.

The combination of XIV hardware and software is designed to provide a high-performance, grid-based architecture that is exceptionally easy to use. This offers a scalable, reliable, enterprise disk system for UNIX™, Linux, Microsoft Windows, and other supported distributed open server platforms.

It can provide a platform to address the need for reducing complexity while keeping pace with midsize to high-end disk capacity demands. An integral product within the IBM Smarter Storage offering, IBM XIV Storage System Gen3 is a good fit for clients who want to grow capacity, improve overall performance, and reduce backup intervals, as well as reduce costs and task load on storage administrators, without the need to manage multiple tiers of storage.

The XIV system is especially well-suited for consolidated utility storage for fast-growing, dynamically mixed, and emerging workloads.

Statement of direction

IBM intends to offer multi-tenancy support in XIV systems. Multi-tenancy is designed to help cloud and managed services providers accommodate customer requirements through features such as tenant-specific access authorization and quality of service.

IBM’s statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM’s sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products
may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

Reference information

For IBM XIV Storage System Gen3 software information, refer to:

- Software Announcement ZP13-0018, dated February 05, 2013, IBM XIV Storage System software version 11.2.0 includes space reclamation enhancements, performance improvements and support for new hardware components for Model 214 and current Model 114
- Software Announcement ZP13-0269, dated June 10, 2013, IBM XIV Storage System software version 11.3.0 (5639-YYB) with IBM Hyper-Scale Mobility and support for 4 TB disk

For information on IBM Security Key Lifecycle Manager, refer to Software Announcement ZP11-0136, dated April 12, 2011, IBM Security Key Lifecycle Manager for z/OS® V1.1 manages encryption keys for storage, simplifying deployment and maintaining availability to data at rest.

Program number

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Offering Information

Product information is available via the Offering Information website

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

Publications

No publications are shipped with this program.

Product publications can be viewed and downloaded online from the IBM XIV Storage System Gen3 Information Center at

http://publib.boulder.ibm.com/infocenter/ibmxiv/r2/index.jsp
The following publications can be ordered from the IBM Publications Center:

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<tr>
<td>Licensing Documentation CD</td>
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<tr>
<td>IBM XIV Storage System Safety Notices (standard - 29 languages)</td>
<td>GA32-0832</td>
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<td>IBM System Storage® XIV Storage System Machine type 2810 and 2812 Statement of Limited Warranty</td>
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The IBM Publications Center


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

Technical information

Specified operating environment

**Hardware requirements**

The IBM XIV Storage System software version 11.4.0 license requires one IBM XIV Storage System Gen3 machine type 2810-214, 2812-214, 2810-114, or 2812-114, in any of the validly orderable configurations.

Refer to the Ordering information section and to the hardware announcements listed in the Reference information section for further information.

**Software requirements**

IBM XIV Storage System software version 11.4.0 supports attachment in multiple host operating system environments.

For current supported software levels and related XIV interoperability, visit the XIV Support website


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

**Companion products**

Other IBM products that can be considered for implementation with the IBM XIV Storage System Gen3 include:

- IBM System Storage SAN Volume Controller
- IBM System Storage TS7650 server (3958-DD5)
- IBM System Storage Tape systems
- IBM Global Services virtualization implementation services
- IBM Novus CG
- IBM FlashSystem™
**Limitations**
For additional information, refer to Usage restriction in the Terms and conditions section, or to the license information document that is available on the IBM Software License Agreement website


**IBM Electronic Support**
The IBM Support Portal is your gateway to technical support. This includes IBM Electronic Support tools and resources, for software and hardware, to help save time and simplify support. The Electronic Support tools can help you find answers to questions, download fixes, troubleshoot, automate data collection, submit and track problems through the Service Request online tool, and build skills. All these tools are made available through your IBM support agreement, at no additional charge.

- Read about the Electronic Support portfolio of tools
  http://ibm.com/electronicsupport
- Access the IBM Support Portal
  http://ibm.com/support
- Access the online Service Request tool
  http://ibm.com/support/servicerequest

**Planning information**
Hardware planning considerations for the IBM XIV Storage System Gen3 machine type-model 2810-214, 2812-214, 2810-114, and 2812-114 systems, such as power boundary allocations and running environment, apply for IBM XIV Storage System software version 11.4.0 installation readiness.

Review the XIV Installation and Planning Guide available at the IBM Information Center

http://publib.boulder.ibm.com/infocenter/ibmxiv/r2/index.jsp

**Customer responsibilities**
IBM XIV Storage System software version 11.4.0 will be preinstalled on the designated machine. Further updates of this code may be designated as customer installed or IBM installed. If designated as customer installed, the software installation responsibility will lie with the customer.

**Packaging**
**New order packaging**
IBM XIV Storage System software version 11.4.0 is preinstalled on, and shipped with, the corequisite IBM XIV Storage System Gen3 machine type-models 2810-214, 2812-214, 2810-114, and 2812-114

License information documents for the XIV Storage System software program ship with the new order.

The following hard copy software documents will be shipped with each new IBM XIV Storage System Gen3 order:

- International Program License Agreement (IPLA) document, Z125-3301
- License Information for IBM XIV Storage System software V11.4.0, GA32-0931

Paid invoice acts as Proof of Entitlement (PoE) for all orders of IBM XIV Storage System version 11.4.0 software.

Refer to the hardware announcements listed in the Reference information section for related hardware order features.
Security, auditability, and control

IBM XIV Storage System software version 11.4.0 uses the security and auditability features of the IBM XIV Storage System Gen3 machine type-model 2810-214, 2812-214, 2810-114, and 2812-114, and IBM XIV Storage System software 5639-YYB. 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.

IBM XIV Storage System software version 11.4.0 Structure

Billing features and pricing information for IBM XIV Storage System Software V11.4.0 remain unchanged.

For basic new order hardware corequisites, refer to the Hardware requirements section.

All available IBM XIV Storage System software version 11.4.0 function is contained in the Base XIV Storage System Software V11 feature.

One 5639-YYB is required per XIV frame. You must order the appropriate SW and SWMA Feature Code one for each module.

For ordering assistance, contact your IBM XIV Sales Specialist, IBM Storage Sales Specialist, or regional IBM Sales Manager.

IBM representatives should confirm that the co-required hardware order System Identification Unit (SIU) number for the IBM XIV Storage System Gen3 machine type-model 2810-214, 2812-214, 2810-114, or 2812-114 is recorded in the correlated software order, including for upgrade orders for Capacity on Demand configurations.

Software Maintenance Registration is required for all new product orders.

Product features include one year Software Maintenance. Software Maintenance Registration must, however, be ordered for each product feature.

Order either one-year (no charge) registration from Software Maintenance PID 5639-XX1 for one-year Software Maintenance, or two, three, four, or five year initial software maintenance registration as needed.

Refer further to the Software Subscription and Support applies section.

Billing features and pricing information for IBM XIV Storage System Software V11.4.0 remain unchanged.
New orders

Order the program number, feature number, and quantity to extend coverage for your software licenses. Extending coverage for a total of two, three, four, or five years from the date of acquisition may be elected. For this option, select the charged registration feature quantity that meets your software maintenance needs from program number 5639-XX9, 5639-XX3, 5639-X12, or 5639-X11, respectively.

Software Maintenance Renewal

Prior to the anniversary of your original software maintenance registration, order Software Maintenance Renewal through CHIS Offering ID 6948-J48 (where available) for continuing capacity usage. Otherwise, for one-year renewal, order from program number 5639-XX1. For three-year renewal, order from program number 5639-XX4. Renewals should be ordered approximately one month in advance of the anniversary expiration. Renewals cannot be aggregated (in a single order) into extended time periods other than one year or three years represented by the features below.

If maintenance has expired, specify the after license feature number. For one year after license renewal, order from program number 5639-XX2. For three year after license renewal, order from program number 5639-XX5.

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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.

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

Agreement for Acquisition of Software Maintenance

The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) 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 Maintenance with the initial license acquisition of each program acquired. The initial period of 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 Software 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
GA32-0931

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


Note: Capacity on Demand orders have unique terms and conditions. Notably, full capacity must be ordered within the first year of ownership. Refer to the "Attachment for XIV Standby Capacity on Demand" agreement for full details.

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.

Other terms

Volume orders (IVO)
Yes. Contact your IBM representative.

Passport Advantage applies
No

Usage restriction
Yes

The following Program Unique Terms apply. IBM installation of software as defined in these terms, supersedes customer installation and upgrade terms as defined in the IBM Agreement for Acquisition of Software Maintenance (Z125-6011).

This program is licensed for use with the IBM XIV Storage System Gen3 with which the program was delivered and only to manage the capacity specified in the proof of
entitlement document for that license. A separate license is required for each IBM XIV Storage System Gen3.

The following paragraphs titled Disabling device, Multiple component versions, and Source code apply to the use of the IBM XIV Storage System Software components. The term Program in these paragraphs shall mean the IBM XIV Storage System Software components.

Disabling device: The Program may include a disabling device that will prevent certain features from being used. You will not tamper with such disabling device or otherwise change the Program.

Multiple component versions: The media for the Program may include multiple versions of the same Program component, such as versions designed for different operating systems and versions translated into different languages. Each Proof of Entitlement for the Program authorizes You to use a single version of a Program component. You are not authorized to use multiple versions of the same Program component under the same Proof of Entitlement, even if multiple versions of a component are included on the media for the Program.

Source code: Some of the components of the Program may be provided in source code form. Notwithstanding anything to the contrary in this Agreement, support is only provided for the unmodified, binary code versions of these components included in the Program packaging, and not for the source code for these components or for any modifications of such components you may create.

Transferability: The Program is nontransferable between IBM XIV Storage Systems and is only to be used on the IBM XIV Storage System Gen3 for which it was purchased. If the system is transferred to a new owner, the program license transfers with the system. However, Software Maintenance does not transfer, and a new maintenance agreement must be purchased by the new owner.

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


Software Subscription and Support applies

Yes. All distributed software licenses include Software Maintenance (Software Subscription and Technical Support) 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 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://techsupport.services.ibm.com/guides/handbook.html

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.

IBM Electronic Services

Electronic Service Agent™ and the IBM Electronic Support web portal are dedicated to providing fast, exceptional support to IBM Systems customers. The IBM Electronic Service Agent tool is a no-additional-charge tool that proactively monitors and reports hardware events, such as system errors, performance issues, and inventory. The Electronic Service Agent tool can help you stay focused on your company’s strategic business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues. Servers enabled with this tool can be monitored remotely around the clock by IBM Support all at no additional cost to you.

Now integrated into the base operating system of AIX® 5.3, AIX 6.1, and AIX 7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type "smitty esa_main", and select "Configure Electronic Service Agent." In addition, ESA now includes a powerful Web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent, refer to

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

The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make
it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

Benefits

**Increased uptime:** The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the "symptoms," diagnosing the error, and manually calling IBM Support to open a problem record. Its 24 x 7 monitoring and reporting mean no more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

**Security:** The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM. The Electronic Service Agent tool securely transmits either via the Internet (HTTPS or VPN) or modem, and can be configured to communicate securely through gateways to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer's system. System inventory information is stored in a secure database, which is protected behind IBM firewalls. It is viewable only by the customer and IBM. The customer's business applications or business data is never transmitted to IBM.

**More accurate reporting:** Since system information and error logs are automatically uploaded to the IBM Support center in conjunction with the service request, customers are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM, problem error data is run through a data knowledge management system and knowledge articles are appended to the problem record.

**Customized support:** Using the IBM ID entered during activation, customers can view system and support information in the "My Systems" and "Premium Search" sections of the Electronic Support Web site at

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

My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent. Reports are available for any system associated with the customer's IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledge base. Using Premium Search and the Electronic Service Agent information that has been collected from your system, customers are able to see search results that apply specifically to their systems.

For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or visit

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

Prices

The prices are unchanged by this announcement.

For all local charges, contact your IBM representative.

**Passport Advantage**

For Passport Advantage information and charges, contact your IBM representative or authorized IBM Business Partner for Software ValueNet. Additional information is also available at

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