IBM Tivoli Switch Analyzer V1.3 adds productivity features

Overview
IBM Tivoli® Switch Analyzer V1.3 extends the management capabilities of IBM Tivoli solutions by providing switching (also known as Layer 2) root-cause management. Today’s TCP/IP networks require multiple protocols for high-speed communications and insight into the behavior and status of Layer 2. In conjunction with IBM Tivoli NetView® and IBM Tivoli Enterprise Console, IBM Tivoli Switch Analyzer V1.3 extends IBM Tivoli’s end-to-end network and event-management capabilities.

New in V1.3
• Adds port status monitoring
  - Introduces dependable, flexible, Layer 2 fault detection at port level
  - Increases network coverage to include the monitoring of remote campus regions and Layer 3 switches
• Adds visualization of Layer 2 topology
  - Enhances troubleshooting ability
  - Determines outage impact easily from connectivity view
  - Troubleshoots client-server problems by identifying devices located between two endpoints
  - Identifies devices participating in specific VLANs

Key prerequisites
IBM Tivoli NetView (Distributed) V7.1.4 with fixpack 2, or later

At a glance
New function in V1.3 of IBM Tivoli Switch Analyzer:
• Adds port status monitoring for better fault detection and increased serviceability
• Helps provide better availability by adding network coverage to include the monitoring of remote campus regions and Layer 3 switches
• Provides better ease of use, enhances troubleshooting capability, and easier serviceability with visualization of Layer 2 topology

Planned availability dates
• March 11, 2005: Electronic software delivery
• April 1, 2005: Media and documentation

For ordering, contact:
Your IBM representative, an IBM Business Partner, or the Americas Call Centers at 800-IBM-CALL
Reference: YE001

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.
IBM Tivoli Switch Analyzer is part of a comprehensive IBM Tivoli network management solution that combines Layer 2, Layer 3, and event management into a root-cause tool. It helps you identify the root-cause of a problem and solves the problem, not the symptom. IBM Tivoli Switch Analyzer V1.3 installs on top of IBM Tivoli NetView (Distributed) V7.1.4 and enhances the event management capabilities of IBM Tivoli NetView through the following new features:

- Port status monitoring enables dependable, flexible, Layer 2 fault detection at port level and extends network coverage to include the monitoring of remote campus regions, redundant switches, and Layer 3 switches.
- Visualization of Layer 2 topology enhances troubleshooting ability, helps determine outage impact easily from connectivity view, troubleshoots client-server problems by identifying devices located between two endpoints, and identifies devices participating in specific VLANs.

IBM Tivoli Switch Analyzer continues to provide:

- Layer 2 root-cause analysis for local area network switches with the capability to identify relationships between devices.
- Frame relay root-cause analysis that can help diagnose frame relay problems across wide area networks, extending root-cause analysis into a much broader set of networks.
- The ability to operate within IBM Tivoli NetView’s control architecture and leverages IBM Tivoli NetView’s data structures to add Layer 2 relationship information within its own Layer 2 databases.
- Layer 2 status availability information, stored in the IBM Tivoli Data Warehouse, via IBM Tivoli NetView V7.1.4.

Consolidation and correlation

By providing Layer 2 discovery and correlation with Layer 3 topology, IBM Tivoli Switch Analyzer offers a root-cause solution without requiring human intervention. A single outage on a central network device can cause numerous outages across your enterprise. IBM Tivoli’s root-cause module can simplify the outage complexity, correlating down events to a single root-cause. This helps users to ensure that resources get directed to the source of the problem and not to multiple symptomatic problems that are simply a result of the root-cause. For example, during a network event storm, IBM Tivoli Switch Analyzer can filter out extraneous events to help determine the true cause of the problem. By identifying the root-cause, IBM Tivoli Switch Analyzer can help to:

- Reduce the time to repair
- Improve the delivery of IT services
- Cut overhead costs

Switch verification setting

A report allows the operator to quickly verify which switches have enough information to be managed at the Layer 2 level.

Automatic management

IBM Tivoli Switch Analyzer automatically discovers Layer 2 devices and identifies the network relationships through Simple Network Management Protocol (SNMP) interrogation of Layer 2 switches. With this information, IBM Tivoli Switch Analyzer gains an understanding of the switches, ports, and blades in relation to the known Layer 3 topology. IBM Tivoli Switch Analyzer takes the information gained from interrogating Layer 2 devices and blends it with the Layer 3 information to form a more complete view of the Layer 2/3 topology.

Redundant path correlation

IBM Tivoli Switch Analyzer supports redundancy in the network, which presents special considerations for root-cause correlation. Network triangulation or meshing causes upstream or downstream arguments to appear insignificant, implying that there should be additional logic to correlate in these complex environments. IBM Tivoli Switch Analyzer solves this with a unique root-cause correlation process where the logical weight of down interfaces, ports, and cards is taken into account.

Product positioning

IBM Tivoli Switch Analyzer V1.3 is targeted at companies that want to monitor and manage the Layer 2 devices and switches currently deployed in their network’s infrastructure and need to resolve network problems. This release targets sites already deploying IBM Tivoli NetView (Distributed) or IBM Tivoli Enterprise Console®.

With the increased dependency on LAN switches in network infrastructure, IBM Tivoli Switch Analyzer V1.3 extends the capabilities of IBM current network management and event management solutions by extending monitoring to these critical network components.

IBM Tivoli Switch Analyzer V1.3 provides the Layer 2 topology views and port status monitoring to help you further improve your ability to achieve faster mean time to repair, reduce management and administrative costs, and keep critical applications and services up and available for end users.

Trademarks

Tivoli Enterprise is a trademark of International Business Machines Corporation in the United States or other countries or both. Tivoli, NetView, and Tivoli Enterprise Console are registered trademarks of International Business Machines Corporation in the United States or other countries or both. Other company, product, and service names may be trademarks or service marks of others.
Offering Information

Product information is available via the Offering Information Web site

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

Also, visit the Passport Advantage® Web site

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

Publications

No publications are shipped with this product.

The IBM Publications Center

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

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the U.S.) or customer number for 50 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.

The IBM Publications Notification System (PNS)

http://service5.boulder.ibm.com/pnsrege.nsf/messages/welcome

PNS enables subscribers to set up profiles of interest by order number/product number. PNS subscribers automatically receive e-mail notifications of all new publications defined in their profiles. These may then be ordered/downloaded from the Publications Center.

The PNS site is available in English and Canadian French.

Technical information

Specified operating environment

Hardware requirements: Hardware platforms supporting the operating systems at the software levels stated in the Software requirements section.

Software requirements

• NetView® V7.1.4 with fixpack 2, or later

Operating systems supported

• AIX® 5.1, 5.2, and 5.3
• Solaris 8 and 9
• Linux™ xSeries®
  - Red Hat 3.0
  - SuSe 8 and 9
• United Linux 1.0
• Linux for zSeries®
  - Red Hat 3.0
  - SuSe 8 and 9
  - United Linux 1.0
• Microsoft™
  - Windows™ 2000 (Server, or Advanced Server) with Service Pack 4
  - Windows XP Professional with Service Pack 1

Web browsers

• Microsoft Internet Explorer 6.0, or later.
• Netscape 6.2.x. Netscape 7.x is not supported.
• Netscape Version 6 is required for correct operation of the Task Assistant in the applet version of the Web console.
• Mozilla 1.7.

Planning information

Packaging

IBM Tivoli Switch Analyzer V1.3 is distributed with:

• CD media
• Electronic License Information

Security, auditability, and control

IBM Tivoli Switch Analyzer uses the security and auditability features of the operating system software.

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

IBM Tivoli Enhanced Value-Based Pricing

IBM Tivoli software products are priced using IBM Tivoli’s Enhanced Value-Based Pricing. The Enhanced Value-Based Pricing system is based upon the IBM Tivoli Environment-Managed Licensing Model, which uses a managed-environment approach — whereby price is determined by what is managed rather than the number and type of product components installed.

For example, all servers monitored with IBM Tivoli’s monitoring product (IBM Tivoli Monitoring) require entitlements sufficient for those servers. Other IBM Tivoli products may manage clients, client devices, agents, network nodes, users, or other items, and are licensed and priced accordingly.
Unlike typical systems management licensing models that require entitlements of specific software components to specific systems, the IBM Tivoli Environment-Managed Licensing Model provides the customer flexibility to deploy its IBM Tivoli software products within its environment in a manner that can address and respond to the customer’s evolving architecture. That is, as the architecture of a customer’s environment changes, the customer’s implementation of IBM Tivoli software can be altered, as needed, without affecting the customer’s license requirements (as long as the customer does not exceed its entitlements to the software).

Under Enhanced Value-Based Pricing, licensing and pricing of server-oriented applications are determined based upon the server’s use in the customer’s environment. Typically, such applications are licensed and priced in a manner that corresponds to each installed and activated processor of the server managed by the IBM Tivoli application to help correlate price to value while offering a simple solution.

Where a server is physically partitioned, this approach is modified. This partitioning technique is the approach used with systems that have either multiple cards or multiple frames, each of which can be configured independently. For servers capable of physical partitioning (for example, IBM’s pSeries® Scalable POWERparallel® Systems servers, Sun Ultra servers, and HP Superdome servers), an entitlement is required for each processor in the physical partition being managed by the IBM Tivoli application. For example, assume that a server has 24 processors installed in aggregate. If this server is not partitioned, entitlements are required for all 24 processors. If, however, it is physically partitioned into three partitions each containing eight processors, and Tivoli products were managing only one of the three partitions, then entitlements would be required for the eight processors on the physical partition managed by the IBM Tivoli application.

For servers with virtual or logical partitions, entitlements are required for all installed and activated processors on the server. For each IBM Tivoli application managing a clustered environment, licensing is based on the cumulative number of installed and activated processors on each server in the cluster for each IBM Tivoli application managing the cluster. Where the cluster includes physically partitioned servers, the considerations described above concerning physically partitioned servers apply as well.

Enhanced Value-Based Pricing recognizes the convergence of RISC/UNIX® and Microsoft Windows/Intel™ technologies, in order to simplify the customer’s licensing requirements, and to provide a smoother, more scalable model. Pricing and licensing does not differentiate between non-zSeries server platforms or operating systems. For some products, this platform neutrality extends to zSeries and other host servers as well.

IBM Tivoli Enhanced Value-Based Pricing terminology definitions

**Client device or client**

A client device is a computer system that requests the execution of a set of commands, procedures, or applications from another computer system that is typically referred to as a server. Multiple client devices may share access to a common server. A client device generally has some processing capability or is programmable to allow a user to do work. Examples include, but are not limited to, notebook computers, desktop computers, desk side computers, technical workstations, appliances, personal digital assistants, automated teller machines, point-of-sale terminals, tills and cash registers, and KIOSKs.

**Network node or node**

Network nodes include routers, switches, hubs, and bridges that contain a network management agent. A single network node may contain any number of interfaces or ports.

**Partitions**

A server’s resources (CPU, memory, I/O, interconnects and buses) may be divided according to the needs of the applications running on the server. This partitioning can be implemented with physical boundaries (Physical Partitions) or logical boundaries (Logical Partitions).

Physical Partitions are defined by a collection of processors dedicated to a workload and can be used with systems that have either multiple cards or multiple frames, each of which can be configured independently. In this method, the partitions are divided along hardware boundaries and processors, and the I/O boards, memory, and interconnects are not shared.

Logical Partitions are defined by software rather than hardware and allocate a pool of processing resources to a collection of workloads. These partitions, while separated by software boundaries, share hardware components and run in one or more physical partitions.

**Port**

A port is the physical connection between a device and the network.

**Processor**

A processor is a functional unit in a computer that interprets and executes instructions. A processor consists of at least an instruction control unit and an arithmetic and logic unit.

**Server**

A server is a computer system that executes requested procedures, commands, or applications to one or more clients and/or other devices over a network. Examples include, but are not limited to, file servers, print servers, mail servers, database servers, application servers, and Web servers.

**Standby or backup systems**

For programs running or resident on backup machines, IBM defines three types of situations: cold, warm, and hot. In the cold and warm situations, a separate entitlement for the copy on the backup machine is normally not required and typically no additional charge applies. In a hot backup situation, the customer needs to acquire another license or entitlements sufficient for that server. All programs running in backup mode must be solely under the customer’s control, even if they are running at another enterprise’s location.

As a practice, the following are definitions and allowable actions concerning the copy of the program used for backup purposes.

**Cold**

A copy of the program may reside, for backup purposes, on a machine as long as the program is not started. There is no additional charge for this copy.
Warm

A copy of the program may reside for backup purposes on a machine and is started, but is idling, and is not doing any work of any kind. There is no additional charge for this copy.

Hot

A copy of the program may reside for backup purposes on a machine, is started, and is doing work. The customer must acquire a license or entitlements for this copy and there will generally be an additional charge.

Doing work includes, for example, production, development, program maintenance, and testing. It also could include other activities such as mirroring of transactions, updating of files, synchronization of programs, data or other resources (for example, active linking with another machine, program, database, or other resource, and so on), or any activity or configurations that would allow an active hot switch or other synchronized switch over between programs, databases, or other resources to occur.

In the case of a program or system configuration that is designed to support a high availability environment by using various techniques (for example, duplexing, mirroring of files or transactions, maintaining a “heartbeat”, active linking with another machine, program, database, or other resource, and so on), the program is considered to be doing work in the hot situation and a license or entitlement must be purchased.

Product Web site

A complete list of products and licensing documents is available at

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

Passport Advantage: Through the Passport Advantage Agreement, customers may receive discounted pricing based on their total volume of eligible products, across all IBM brands, acquired worldwide. The volume is measured by determining the total “Passport Advantage points value” of the applicable acquisitions. Passport Advantage points are only used for calculating the entitled Passport Advantage discount.

To determine the required Tivoli product configuration under Passport Advantage, the Tivoli Enhanced Value-Based Pricing Model applies. The customer’s environment is evaluated on a per-product basis.

Use the following two-step process to determine the total “Passport Advantage points value”:

1. Analyze the customer environment to determine the number of Tivoli Management Points or other charge unit for a product. The quantity of each product’s part numbers to be ordered is determined by that analysis.

2. Order the Passport Advantage part numbers. A Passport Advantage point value, which is the same worldwide for a specific part number regardless of where the order is placed, is assigned to each Tivoli product part number. The Passport Advantage point value for the applicable part number multiplied by the quantity for that part number will determine the Passport Advantage points for that Tivoli product part number. The sum of these Passport Advantage points determines the “Passport Advantage point value” of the applicable Tivoli product authorizations which then may be aggregated with the point value of other applicable Passport Advantage product acquisitions to determine the total “Passport Advantage points value”.

The discounted pricing, available through Passport Advantage, is expressed in the form of Suggested Volume Prices (SVPs), which vary depending on the SVP level. Each SVP level is assigned a minimum total Passport Advantage point value, which must be achieved, in order to qualify for that SVP level.

Media packs and documentation packs do not carry Passport Advantage points and are not eligible for SVP discounting.

For additional information on Passport Advantage, refer to the following Web site

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

The following Passport Advantage part number categories may be orderable:

• License and Software Maintenance 12 Months — this is the product authorization with maintenance to the first anniversary date.

• Annual Software Maintenance Renewal — this is the maintenance renewal for one anniversary that applies when a customer renews their existing coverage period prior to the anniversary date at which it expires.

• Software Maintenance Reinstatement 12 Months — this is for customers who have allowed their Software Maintenance to expire, and later wish to reinstate their Software Maintenance.

• Media packs — these are the physical media, such as CD-ROMs, that deliver the product’s code.

• Documentation packs — these contain printed documentation such as the User’s Guide and Release Notes.

• Custom Build Registration — this is used with products that have an IBM zSeries component. Ordering this part number results in a process to enable the customer to receive the zSeries code via the z/OS® Customized Offerings packaging techniques, that is, ServerPac, SystemPac®, or the Custom Build Product Delivery Option (CBPDO).

Exceptions to the Environment-Managed Licensing Model

IBM Tivoli products are priced based on the Environment-Managed Licensing Model and follow the definitions laid out in the IBM Tivoli Enhanced Value-Based Pricing terminology definitions section of this announcement, with the following exception:

• IBM Tivoli Switch Analyzer

Count the processors in the servers in which IBM Tivoli Switch Analyzer runs, plus the number of ports managed.

Pricing examples

IBM Tivoli Switch Analyzer

The customer’s overall network environment includes:

Distributed servers

• 20 uniprocessors
• 65 2-way servers
• 12 4-way servers
• One 8-way server
• One 12-way server with 2 virtual or logical partitions
• One 14-way server
• One 16-way Sun Ultra server with 2 8-way physical partitions (only one of which is managed by Tivoli applications)
• One 24-way server

Others:
• 100 network nodes

The customer wants to manage events on its 100 network nodes (routers, switches, bridges, and hubs), which have a total of 2,000 ports. The customer manages these from one of their two-way servers. For IBM Tivoli Switch Analyzer, the application server (where the IBM Tivoli NetView or IBM Tivoli Switch Analyzer server code is running) is the server to which the per-processor licensing applies and is an exception to the Environment-Managed model.

The customer must acquire the following entitlements:

<table>
<thead>
<tr>
<th>Systems managed</th>
<th>Quantity in customer environment</th>
<th>Entitlements required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td>Total Entitlements</td>
<td></td>
<td>2,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Managing system</th>
<th>Quantity in customer environment</th>
<th>Processor entitlements required</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-way (managing server)</td>
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<td>2</td>
</tr>
<tr>
<td>Total Processor Entitlements</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

### Ordering information

This product is only available via Passport Advantage. It is not available as shrinkwrap.

### Product information

<table>
<thead>
<tr>
<th>Licensed function title</th>
<th>Product group</th>
<th>Product category</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Tivoli Switch Analyzer</td>
<td>Tivoli</td>
<td>Tivoli Storage Management</td>
</tr>
</tbody>
</table>

### Passport Advantage customer: Media pack entitlement details

Customers with active maintenance or subscription for the products listed are entitled to receive the corresponding media pack.

#### Entitled maintenance offerings

<table>
<thead>
<tr>
<th>Media packs description</th>
<th>Part number</th>
</tr>
</thead>
</table>

**New licensees:** Orders for new licenses will be accepted now.

Shipment will begin on the planned availability date.

**License transferability:** Charge units are product specific and may not be transferred to another product.

**Note:** There is no transferability in licensing between platforms for end-to-end products where pricing on the IBM @server zSeries platform is based on MSUs and pricing on other platform servers is per processor.
Basic license

Ordering information for Passport Advantage: Passport Advantage allows you to have a common anniversary date for Software Maintenance renewals, which can simplify management and budgeting for eligible new versions and releases (and related technical support) for your covered products. The anniversary date, established at the start of your Passport Advantage Agreement, will remain unchanged while your Passport Advantage Agreement remains in effect. New software purchases will initially include twelve full months of maintenance coverage. Maintenance in the second year (the first year of renewal) can be prorated to be coterminous with your common anniversary date. Thereafter, all Software Maintenance will renew at the common anniversary date and include twelve full months of maintenance.

Refer to the IBM International Passport Advantage Agreement and to the IBM Software Maintenance Handbook for specific terms relating to, and a more complete description of, technical support provided through Software Maintenance.

The quantity to be specified for the Passport Advantage part numbers in the following table is per processor plus ports. To order for Passport Advantage, specify the desired part number and quantity.

Passport Advantage program licenses

IBM Tivoli Switch Analyzer

<table>
<thead>
<tr>
<th>Part description</th>
<th>Part number</th>
</tr>
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<tbody>
<tr>
<td>IBM Tivoli Switch Analyzer</td>
<td>E00ANLL</td>
</tr>
<tr>
<td>IBM Tivoli Switch Analyzer Port</td>
<td>D515KLL</td>
</tr>
<tr>
<td>Annual SW Maint Renewal</td>
<td>D515M00</td>
</tr>
<tr>
<td>IBM Tivoli Switch Analyzer Port</td>
<td>E00AML0</td>
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<tr>
<td>Lic+SW Maint 12 Mo</td>
<td>D515HLL</td>
</tr>
<tr>
<td>IBM Tivoli Switch Analyzer Port</td>
<td>D515JLL</td>
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<tr>
<td>SW Maint Reinstatement 12 Mo</td>
<td>E00K6LL</td>
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<tr>
<td>IBM Tivoli Switch Analyzer Processor</td>
<td>D51TULL</td>
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<td>Annual SW Maint Renewal</td>
<td>D51TWER</td>
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<td>E00K5LL</td>
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<tr>
<td>Processor Lic+SW Maint 12 Mo</td>
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<tr>
<td>S/390 Port Annual SW Maint Renewal</td>
<td></td>
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<tr>
<td>IBM Tivoli Switch Analyzer for zSeries</td>
<td></td>
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<tr>
<td>S/390 Port Lic+SW Maint 12 mo</td>
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<tr>
<td>IBM Tivoli Switch Analyzer for zSeries</td>
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<td>S/390 Port SW Maint Reinstate 12 Mo</td>
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<td>IBM Tivoli Switch Analyzer for zSeries</td>
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</table>

To order a media pack for Passport Advantage, specify the part number in the desired quantity from the following table:

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Tivoli Switch Analyzer Multi OS V1.3</td>
<td>BJ0EQML</td>
</tr>
</tbody>
</table>

IBM Tivoli Switch Analyzer is also available via Web download from Passport Advantage.

Terms and conditions

This product is only available via Passport Advantage. It is not available as shrinkwrap.

Licensing: IBM International Program License Agreement. Proofs of Entitlement (PoE) are required for all authorized use.

Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

License information form numbers

<table>
<thead>
<tr>
<th>Program name</th>
<th>Program number</th>
<th>Form number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Tivoli Switch Analyzer</td>
<td>5724-C72</td>
<td>Electronic License</td>
</tr>
</tbody>
</table>

Limited warranty applies: Yes

Money-back guarantee: If for any reason you are dissatisfied with the program, return it within 30 days from the invoice date, to the party (either IBM or its reseller) from whom you acquired it, for a refund. This applies only to your first acquisition of the program.

Copy and use on home/portable computer: IBM Tivoli Switch Analyzer — No

Volume orders (IVO): No

Passport Advantage applies

Yes, and through the Passport Advantage Web site at http://www.ibm.com/software/passportadvantage

Usage restriction: Yes. Number of processors plus ports.

IBM Operational Support Services — Support Line: No

iSeries™ Software Maintenance applies: No

Educational allowance available: Not applicable

Prices

Passport Advantage

For Passport Advantage information and charges, contact your IBM representative or authorized IBM Business Partner. Additional information is also available at http://www.ibm.com/software/passportadvantage
Order now

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

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

Phone: 800-IBM-CALL (426-2255)  
Fax: 800-IBM-FAX (242-6329)  
Internet: ibm__direct@vnet.ibm.com  
Mail: IBM Americas Call Centers  
Dept: IBM CALL, 11th Floor  
105 Moatfield Drive  
North York, Ontario  
Canada M3B 3R1

Reference: YE001

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

Note: Shipments will begin after the planned availability date.

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UNIX is a registered trademark of the Open Company in the United States and other countries.  
Linux is a trademark of Linus Torvalds in the United States, other countries or both.  
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