IBM Tivoli Netcool Performance Manager 1.3 offers value for wireline/fixed/IP, wireless/mobile, and convergent network service providers and for wireline (fixed/IP) performance management

Table of contents

At a glance

Tivoli® Netcool® Performance Manager (TNPM) 1.3 offers new features that provide value for wireline/fixed/IP, wireless/mobile, and convergent network service providers. In addition, major new features with specific value for wireline/fixed/IP performance management are included.

Key common features for wireline/fixed and wireless/mobile PM:

- Navigation between Webtop/Omnibus 2.2 and TNPM
- Innovative reporting tool through Integration of Cognos® capabilities with Tivoli Common Reporting in the Tivoli Integrated Portal (TIP)
- Enhanced reporting enablement, providing sample data models and sample reports to aid customers and their partners to build an enhanced report layer with Cognos

Key new features for wireline/fixed/IP:

- Composite Resources for service-oriented KPI modeling of logical network resources, for example a pair of network connections, or of a service such as VPN
- Integration of DataView with the Tivoli Integrated Portal enabling backwards compatibility with existing wireline/fixed/IP reports on upgrade to V1.3
- Mass Data Export of wireline/fixed/IP PM data

Enhancements for wireline/fixed/IP:

- Support for AIX® (IBM® operating system software) is now supported for all TNPM components for wireline/fixed/IP.
- Upgrade support enables migration of standard DataView Reports for visibility in the Tivoli Integrated Portal.

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: SE001).

Overview

Tivoli Netcool Performance Manager (TNPM) 1.3 enables service providers and enterprises to manage network performance of both fixed/IP (wireline) and mobile (wireless) networks. It provides comprehensive, flexible, and scalable performance management with visualization and reporting of network performance data for complex, multivendor, multi-technology networks. It offers role-based views with robust security features that are designed to help meet the needs of executive/ management and converging network and IT operations teams.

TNPM V1.3 introduces a new console technology, Tivoli Integrated Portal, and a new reporting engine, Tivoli Common Reporting (TCR) based on Cognos. These new technologies offer additional business value to wireline/fixed and wireless/ mobile customers using our network performance management solutions today. In addition, these technologies enable a consistent user experience across the broad Tivoli Software solution portfolio.

With TNPM, customers can consolidate performance management (PM) tools to a single vendor solution to help lower cost of ownership. TNPM enables organizations to move toward wireline/wireless convergence and next-generation networks at their own pace, while continuing to support existing mature technologies with the same solution.

Tivoli Netcool Performance Manager is a component of IBM's broad Service Management solution set, supporting visibility, control, and automation for smarter optimized network and IT operations.

Key prerequisites

Refer to the Hardware requirements and Software requirements sections.

Planned availability date

April 30, 2010, electronic software delivery
May 10, 2010, media and documentation

Description

IBM Tivoli Netcool Performance Manager V1.3 offers unique value to network service providers and enterprises who want to:

- Rationalize the number of tools they use for monitoring network performance
- Optimize their network and service management processes (for consistent network service quality levels and customer experience)
- Lower cost of operation

With this single vendor solution that is part of a broader integrated service management suite of solutions, customers can provide broad visibility across operations and business functions of consistent PM data with role-based interactive views, in addition to management- and executive-level reports.

TNPM V1.3 introduces a new console technology, Tivoli Integrated Portal (TIP), and a new reporting engine, Tivoli Common Reporting (TCR) based on Cognos. These new technologies offer additional business value to wireline/fixed/IP and wireless/ mobile customers using our network performance management solutions today. In addition, these technologies enable a consistent user experience across the broad Tivoli solution portfolio.

TNPM 1.3 offers the following new features:

- Common for wireline/fixed/IP and wireless/mobile PM
  - Navigation between Webtop/Omnibus and TNPM (out-of-the-box integration)
  - Innovative reporting via Cognos in Tivoli Common Reporting
- Key new features for wireline/fixed/IP PM
  - Composite Resources for end-to-end PM
  - Backwards compatibility in TIP for DataView for wireline/fixed/IP
  - Mass data export
  - Export of wireline/fixed/IP data for integration with wireless PM data
  - 100% wireline/fixed/IP support for AIX

Integrated with Tivoli Integrated Portal

TNPM 1.3 offers enhanced usability and simplified application administration through integration with the Tivoli Integrated Portal (TIP). A key component of TIP is Tivoli Common Reporting, which offers a single reporting tool for use across all Tivoli applications integrated with TIP. The version of Tivoli Common Reporting shipped with TNPM 1.3 includes a subset of Cognos capabilities at no additional license cost, enabling users of TNPM 1.3 to create, share, and manage reports, including network performance data from both the wireline/fixed/IP and wireless/mobile domains.

The key benefits of TNPM 1.3 integration with TIP include:

- **Innovative reporting capability.** Tivoli Common Reporting based on Cognos.
- Single sign-on, which can reduce the cost of user management. A shared Lightweight Directory Access Protocol (LDAP) for Tivoli applications that share the same instance of TIP.
- Easier integration with third-party portals. TNPM GUI components can be included in a customer's portal where compliant with the industry-standard Web Services for Remote Portlets (WSRP) specification. Third-party content can also be integrated into the Tivoli Integrated Portal as portlets or full TIP pages.
- Faster navigation between Event and Performance Management views. TNPM for wireline/fixed/IP interoperates with Webtop 2.2 for Netcool/Omnibus. The user can easily drill down from the Webtop active event list to the actual report contained in TNPM's DataView. In addition, single sign-on ensures that users do not have to log into TNPM when navigating from Omnibus/Webtop. The PM report can be launched within the same TIP portal as the Webtop event viewer, rather than in a separate window.

Guidance for customers and partners that want to re-brand the Tivoli Integrated Portal will be provided in the TNPM product documentation set.

Enabled for Common Reporting

In TNPM 1.3, support for Tivoli Common Reporting is provided through out-of-the-box integration with Cognos query and report design capabilities. There is no additional license cost for accessing a base set of Cognos capabilities for use with Tivoli applications such as Cognos Connection, Cognos Administration, Query Studio, Report Studio, Cognos Viewer, Framework Manager, and Map Manager.

Through the Cognos Framework Manager, the customer or partner can create a business-oriented reporting data model for a technology/vendor containing reporting entities and their mappings to the underlying wireline/fixed/IP or wireless/mobile database schema (Tech Pack). Once the Cognos data model or Framework is published, the Cognos Report Designer GUI can be used to build report templates for publishing to the Tivoli Common Reporting directory in TIP.

In addition, a Cognos enablement package containing sample data models and report templates will be provided via OPAL. This support is to guide the customer in leveraging the value of Cognos to build PM reports.

The customer can use these samples for a quick start and can then extend the data models to include specific data that they require. The sample Cognos data models will align with the Tivoli Common Data Model, thereby supporting correlation of PM data with relevant data in different Netcool applications.

Additional wireline/fixed/IP PM features and benefits

The following sections outline the key new features in TNPM 1.3 for wireline/fixed/IP network performance management.

Composite resources

The Composite Resource feature enables service-oriented KPI modeling of logical resources for the purpose of reporting on logical entities or end-to-end service paths. The benefit for the customer is enhanced service level reporting for network operations and end-user customers. The ability to define more service-oriented KPIs makes it easier to monitor the service level experienced by the customer.

Grouping is used in TNPM to organize physical network resources discovered through inventory. It provides a hierarchical structure for organization of resources. Each group is a flat collection that does not reflect relations between the contained physical resources.

The new feature enables the creation of a more service-oriented model of network resources with an upper layer of logical resources mapping to a lower layer of physical resources such as network elements and interfaces. A logical resource, for example, a link, a service, or a virtual private network, can now be defined based on the relationship between physical resources.

Composite resources are intended to model services or logical resources and define relationships between objects that impact the availability of the service/logical resource. KPIs can now be reported on the composite resources to provide enhanced service level reporting. Composite Resource Groups are also visible for navigation in reports.

Mass Data Export

TNPM 1.3 provides a robust programmatic interface called the Mass Data Export (MDE) to enable large volumes of wireline/fixed/IP PM data to be exported from the TNPM system for input to other systems or processes. There is no additional license charge for using TNPM APIs to export data to IBM Tivoli applications. The value of this feature is that it enables you to efficiently share relevant PM data across multiple network and business operations teams, replacing time-consuming manual processes with automated procedures. This feature can be used to streamline processes related to business intelligence reporting, and SQM/SLA reporting, billing, and revenue assurance.

Note: The existing Data Access API for non-bulk data extract continues to be available.

Export of wireline/fixed/IP data for integration with TNPM for wireless/ mobile data

A Loader Information Format (LIF) that is required by the mobile wireless TNPM component is also supported. The value of this is that wireline/fixed/IP data can be exported to the wireless/mobile database. With this approach, the data from the wireline/fixed/IP database can be integrated with the data in the wireless/mobile TNPM database, enabling end-to-end reporting; for example, via Cognos.

Once loaded, the customer can use the mobile wireless TNPM database as a Tivoli Common Reporting warehouse. This usage scenario is applicable for customers that deploy both the mobile wireless components as well as the wireline/fixed/IP TNPM components. As part of this release, IBM will provide an example configuration of the MDE to create a LIF file.

Wireline/fixed/IP support for AIX

In TNPM 1.3, all wireline/fixed/IP components including DataView support IBM's AIX operating system. Customers upgrading from Version 1.2 will no longer need a separate Solaris box.

Accessibility by people with disabilities

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

> http://www.ibm.com/able/product_accessibility/index.html

Product positioning

IBM Tivoli Netcool Performance Manager is positioned in the IBM Tivoli portfolio as a scalable and flexible performance management solution that can be integrated with other key OSS solutions to support operational efficiency initiatives.

The possible OSS integrations cover a large range of possibilities:

- Netcool/OMNIbus™ integration. Benefits are intended to include faster troubleshooting (especially when faults originate from poor network performance, which is increasingly the case in next-generation network (NGN) services and networks). Available out-of-the-box.
- IBM Tivoli Netcool Service Quality Management Center (TNSQMC) integration, through which Tivoli Netcool Performance Manager feeds key performance indicators (KPIs) into TNSQMC, which can then compute key quality indicators (KQI) and delivers performance-based SLA reports to service managers and customers. Available as a customization.

Custom integrations with provisioning or inventory system are designed to help deliver automation and operating expenditures (OPEX) reduction. For example, network changes owned by inventory and provisioning systems can be automatically communicated to Tivoli Netcool Performance Manager, so its configuration repository should remain up-to-date, with minimal manual intervention. The intended benefits include helping with OPEX reduction and efforts to increase data integrity.

Program number

```
Program                Program
number      VRM        name

5724-W86    1.3        IBM Tivoli Netcool Performance Manager
```

Education support

Comprehensive education for IBM Tivoli products is offered through Worldwide Tivoli Education Delivery Services. A wide range of training options are available, including classes led by instructors, learning on demand, on-site training, and blended learning solutions.

For additional information, visit

> http://www-306.ibm.com/software/tivoli/education/

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

A softcopy of the IBM Tivoli Netcool Performance Manager publications can be found at the IBM Publication 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 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

Tivoli Netcool Performance Manager wireless

Server: The minimum hardware requirements for a Tivoli Netcool Performance Manager for wireless server are:

2 x UltraSPARC IV or IV+ processors (Solaris)
2 x Quad-Core Intel® XEON processors (Linux®)
16 GB core memory
4 x 72 GB and 6 x 146 GB hard disks
Optical drive (DVD ROM/R/RW)

Client: The minimum hardware requirements for a Tivoli Netcool Performance Manager for wireless client are:

1.4 GHz Pentium® III, or higher, processors
1 GB core memory

Tivoli Netcool Performance Manager wireline

The following are for minimal requirements and are approximate. Contact your IBM representative to arrange for a sizing assessment based on your specific needs and plans.

Solaris:

Sun SPARC hardware:

- Minimum hardware required for a single server deployment:
  - 8-core - UltraSPARC VI processor
  - 16 GB memory

– 4 x 73 GB disk

AIX:

IBM System p® hardware:

- Minimum hardware required for a single server deployment:
  - IBM POWER6™ CPU - 4.2 GHz, or higher -- four cores
  - 16 GB memory
  - 2 x 146 GB disk

Linux:

- Minimum hardware required for a single server deployment:
  - Two x 2.40 GHz quad-core Intel Xeon 5500 series processors
  - 16 GB memory
  - 300 GB disk

For distributed installations, Tivoli Netcool Performance Manager wireline may be configured on virtualized containers/partitions, with each module (DataView, DataLoad, DC, DM/DB) in a separate virtual system, with each virtual system supporting the minimum CPU, memory, and disk requirements stated above.

For further configuration recommendations, refer to the *Configuration Recommendations Guide* that can be found, along with the rest of the Tivoli Netcool Performance Manager documentation, at the IBM Tivoli Network Management documentation information center

http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/index.jsp?toc=&percent;20/com.ibm.netcool_proviso.doc/toc.xml

Software requirements

Tivoli Netcool Performance Manager wireless

The following third-party products are required for the server and client. Version information can be found in the Installation Guide.

Server:

- Solaris (SPARC)
- Red Hat Linux 5 (x86_64)
- Oracle Enterprise Edition
- Perl
- JBoss AS
- Java™ Runtime Environment

Client:

- Windows®
- Browser - Internet Explorer or Firefox
- Java Runtime Environment

Tivoli Netcool Performance Manager wireline

The following third-party products are required for the server and client.

- Sun Solaris 10 (SPARC)
- AIX V5.3 or V6.1
- Red Hat Linux 5 (x86) (SNMP data collector only, rest of system per above)

- Oracle Enterprise Edition 10g with Partitioning
- OpenSSH 5.0

Client:

- Microsoft® Windows
- Browser - Internet Explorer or Firefox

The Configuration recommendation guide for Tivoli Netcool Performance Manager wireline (Netcool/Proviso) provides further details on platforms and prerequisites. This guide can be found, along with the rest of the Tivoli Netcool Performance Manager product documentation, at the IBM Documentation Product Information Center

http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/index.jsp?toc=/com.ibm.netcool_proviso.doc/toc.xml

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

The following products can be used in conjunction with IBM Tivoli Netcool Performance Manager V1.3 to provide the following capabilities:

- IBM Tivoli Netcool/Webtop V2.2 (out-of-the-box integration available)
  - When performance thresholds are crossed, TNPM issues Simple Network Management Protocol (SNMP) traps to Netcool/Omnibus for processing.
  - Conversely, when NOC operators receive such an alert, they can drill down from the Netcool/Webtop Active Event List console to the applicable IBM Tivoli Netcool Performance Manager report.
- IBM Tivoli Netcool Service Quality Management Center (TNSQMC) V4.1.1 (out-of-the-box integration is not available; check for availability.)
  - Through this integration, IBM Tivoli Netcool Performance Manager feeds key performance indicators (KPIs) into TNSQMC, which can then compute key quality indicators (KQI) and deliver performance-based SLA reports to service managers and end users.

Planning information

Installability

Software Subscription and Support (also referred to as Software Maintenance) is included with licenses purchased through Passport Advantage and Passport Advantage Express. Product upgrades and technical support are provided by the Software Subscription and Support offering as described in the Agreements. Product upgrades provide the latest versions and releases to entitled software, and technical support provides voice and electronic access to IBM support organizations, worldwide.

IBM includes one year of Software Subscription and Support with each program license acquired. The initial period of Software Subscription and Support can be extended by the purchase of a renewal option, if available.

Packaging

IBM Tivoli Netcool Performance Manager is distributed with:

- International Program License Agreement (Z125-3301)
- License Information document

- CD/DVD

- Publications (refer to the Publications section)

This program, when downloaded from a Web site, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

Security, auditability, and control

IBM Tivoli Netcool Performance Manager 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.

Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

    http://www.ibm.com/software/sw-services/

Licensing metric definitions and pricing examples

Licensing metric definitions

Application Instance

Application Instance is a unit of measure by which the program can be licensed. An entitlement is required for each instance of an application connected to or managed by the program. An application in a test, development, staging, or production environment is each considered to be a separate instance of the application and each must have an entitlement. As well, multiple application instances in a single environment are each considered to be separate instances of the application and each must have an entitlement.

Resource Value Unit

Resource Value Unit (RVU) is a unit of measure by which the program can be licensed. RVU Proofs of Entitlement are based on the number of units of a specific resource used or managed by the program. Licensee must obtain sufficient entitlements for the number of RVUs required for licensee's environment for the specific resources as specified in the table below. RVU entitlements are specific to the program and the type of resource and may not be exchanged, interchanged, or aggregated with RVU entitlements of another program or resource.

Licensee must obtain entitlements for this program sufficient to cover the resources managed by the program. In addition, in some cases, Licensee must also obtain entitlements for each resource which is available to the program. Refer to the program-specific Resource Value Unit table.

Standby or backup systems

For programs running or resident on backup machines, IBM defines three types of situations: cold, warm, and hot. In 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 other license or entitlements sufficient for that server. All programs running in backup mode must be solely under the customer's control, even if 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), the program is considered to be doing work in the hot situation and a license or entitlement must be purchased.

Product and licensing Web sites

A complete list of IBM Tivoli products is available at

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

IBM Tivoli product licensing documents are available at

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

Passport Advantage

Through the Passport Advantage Agreement, you 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 IBM Tivoli product configuration under Passport Advantage, 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 your environment to determine the number of charge units 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 IBM 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 IBM Tivoli product part number. The sum of these Passport Advantage points determines the Passport Advantage point value of the applicable IBM 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:

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

The following Passport Advantage part number categories may be orderable:

- License and Software Subscription and Support 12 Months: This is the product authorization with maintenance to the first anniversary date.
- Annual Software Subscription and Support 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 Subscription and Support Reinstatement 12 months: This is for customers who have allowed their Software Subscription and Support to expire and later wish to reinstate their Software Subscription and Support.
- 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.

Pricing examples

IBM Tivoli Netcool Performance Manager is priced using the following chargeable components and metrics:

Base per application instance:

An IBM Tivoli Netcool Performance Manager (TNPM) Application Instance entitles the Licensee to one wireline and one wireless database. The total number of entitlements required is based on the highest number of database instances of the same type (that is, the number of wireline or wireless instances). There are no restrictions on the number of instances of the DataLoad, DataView, or DataChannel components that are permitted per each TNPM Application Instance.

Each Application Instance also entitles the Licensee to use the following TNPM components:

- Tivoli Netcool Performance Manager Wireline - DataLoad
- Tivoli Netcool Gateways Framework
- Tivoli Netcool Performance Manager Wireless - Gateway SNMP
- Tivoli Netcool Performance Manager ModelMaker

Base per Resource Value Unit:

Resource Value Units will be calculated in the following manner. Supported entities are assigned a certain point value based on size or performance level of the entities.

Resource Value Units are calculated from the total point value (TPV) as outlined below.

Points are assigned to managed entities as follows:

```
 Managed Entity Point table


Managed Entity    Devices                                        Points


Managed Entity 8  Large Switch Service Provider Core devices   5000
Managed Entity 7  WAN Service, Service Aggregation  devices     500
Managed Entity 6  Large Branch Router / Switch devices          250
Managed Entity 5  Small Branch and CPE Router devices            70
Managed Entity 4  Wireless Cell/ Sector                          70
Managed Entity 3  Enterprise VoIP Phones                          3
Managed Entity 2  Carrier VoIP Phones                             1
Managed Entity 1  Subscriber - DSL, Cable, STB Cable             1
```

The following VUE 002 Table F factor is then applied to determine the Resource Value Units.

```
VUE 002 Table F


Points from
quantity          To quantity        Factor

        1             60,000        0.050
   60,001            300,000        0.045
  300,001            600,000        0.040
  600,001          1,200,000        0.035
1,200,001          1,800,000        0.030
1,800,001          2,400,000        0.025
2,400,001          3,600,000        0.020
3,600,001          5,100,000        0.015
5,100,001          6,600,000        0.010
6,600,001          8,400,000        0.005
8,400,001          and more        0.0025
```

Technology Pack Tier 1 - 5 per application instance:

IBM has assigned each IBM Tivoli Netcool Performance Manager Technology Pack to a Technology Pack Tier based on price. You must acquire a Proof of Entitlement (PoE) for the corresponding tier for each Technology Pack that runs on an application instance of TNPM. You may not substitute a PoE for a Technology Pack from one tier for a PoE for a Technology Pack from a different tier.

Optional features:

- Tivoli Netcool Performance Manager Data Access for Wireline (Data Access); including Mass Data Extraction (MDE)
- Tivoli Netcool Performance Manager Real Time Reports for Wireline (Real Time Reports)

Licensee must acquire a PoE for each instance of Data Access and Real Time Reports, for each Application Instance of TNPM that Licensee deploys.

The MDE feature may be used without charge, subject to the following limitations: 1) Licensee may use MDE to extract data from an Application Instance's database for the sole purpose of integrating with Tivoli products; and 2) only a single instance of MDE per Application Instance may be used.

A PoE for Data Access is required when either following conditions are met: 1) data extraction is used for purposes other than integrating with other Tivoli products; or 2) more than one MDE instance is used in a single Application Instance of TNPM.

Technology Pack Tier 1: IBM has assigned each IBM Tivoli Netcool Performance Manager Technology Pack to a Technology Pack Tier based on price. This list is accurate as of the date of this announcement. Contact your IBM representative or IBM Business Partner for a current list of technology packs and current list of managed entities.

Wireline:

```
Active Directory ASM
Alcatel 7330/7302 ISAM
Alcatel Platform Monitoring
Apache ASM
Avaya Communication Manager Device
Cisco AAL5 VCC (ATM Channel Endpoint)
Cisco Catalyst Port QoS
Cisco Class Based QOS
Cisco CMTS
Cisco Device
Cisco Ethernet IP SLA
Cisco Integrated Dashboard
Cisco IP SLA
Cisco IP SLA Administration
Cisco IPT
Cisco MPLS TE (Tunnel)
Cisco NBAR
DISMAN Ping MIB
DSL (RFC 2662)
Exchange Server ASM
Frame Relay (RFC 2115)
Huawei Device Pack
Huawei MPLS
Huawei Ping
IneoQuest Media Monitor (IPTV)
IP Multicast
Juniper E Series
Juniper E Series QOS
Juniper M/T Chassis
Juniper M/T QOS
Juniper MPLS TE
Juniper RPM
Lotus Notes® ASM
MIB-2
Netcool/Proviso - Monitoring
Oracle ASM
RADIUS Accounting
RADIUS Authentication
Redback SmartEdge 800
SAP ASM
Server Monitoring (SSM)
Sybase ASM
Weblogic ASM
Websphere ASM
```

Technology Pack Tier 2: IBM has assigned each IBM Tivoli Netcool Performance
Manager Technology Pack to a Technology Pack Tier based on price. This list is
accurate as of the date of this announcement. Contact your IBM representative or
IBM Business Partner for a current list of technology packs as appropriate.

Wireline:

```
ACME Packet (SBC)
ACME Packet (SBC) HDR
ADVA Optical Metro Ethernet
Arris CMTS
Alcatel 5020 MGC
Convedia Media Server
Radcom OmniQ
Tekelec (VocalData) VoIP App Server
```

Wireless:

```
Alcatel BSS B9
Alcatel BSS B10
Ericsson BSS R07B
Ericsson BSS R12 06B
Ericsson GGSN R3
Ericsson GGSN R5
Ericsson MGW R4.1
```

```
Ericsson MGW R4.2
Ericsson MGW R5.1
Ericsson NSS 12.1
Ericsson SGSN R6
Ericsson SGSN R7
Ericsson SGSN R8
Ericsson UTRAN P5
Ericsson UTRAN P6
Ericsson UTRAN P7
Huawei BSS V300R002005
Huawei BSS V300R007
Huawei BSS V900R008
Huawei GGSN V800R002
Huawei GGSN V800R006
Huawei MGW V200R006
Huawei MSC-S V100R006
Huawei SGSN V800R006
Huawei SGSN V800R007
Huawei UTRAN R008
Huawei UTRAN V200R010
Motorola BSS GSR8
Motorola GGSN
Nokia BSS S12
Nokia MGW U2/U3C
Nokia MGW U4
Nokia NSS M13.5/13.2
Nokia NSS M14.1
Nokia UTRAN RAS5.1
Nokia UTRAN RAS6.0
Nortel BSS 14.0
Nortel BSS 15.0
Nortel BSS V16
Nortel EVDO 4
Nortel EVDO 5
Nortel EVDO 6
Nortel MGW 20
Nortel MSC 20
Nortel MTX 14.0
Nortel MTX 15.0
Nortel PDSN 6.0
Nortel UTRAN R5
Siemens BSS BR9
Siemens BSS BR10
Siemens GSN 4.0
Siemens ngHLR
Siemens NSS SR 12
Siemens NSS SR 13
Siemens UTRAN R5
Siemens UTRAN UMR6.5
ZTE EVDO V8.0.1.9
ZTE EVDO V8.19.04
ZTE PDSN 3.5.0.3
```

Technology Pack Tier 3: IBM has assigned each IBM Tivoli Netcool Performance Manager Technology Pack to a Technology Pack Tier based on price. This list is accurate as of the date of this announcement. Contact your IBM representative or IBM Business Partner for a current list of technology packs as appropriate.

Wireline:

```
Alcatel 5620 NM
Alcatel 5620 SAM
Alcatel 7510
Alcatel 8605 MMAS
Alcatel Lucent 5529 SDC
Accedian Metro Ethernet
Avaya Communciation Manager Voice Quality and CDR
Cisco NetFlow / IPFLIX
Cisco WAN Manager
Empirix Hammer XMS
Ericsson Call Server
EXFO Brixworks
Fujitsu MSAN
```

```
Huawei N2000 Access
Huawei NetStream
Huawei T2000 (Transmission)
Nortel BCP7200
Nortel MG3200
```

Technology Pack Tier 4: IBM has assigned each IBM Tivoli Netcool Performance Manager Technology Pack to a Technology Pack Tier based on price. This list is accurate as of the date of this announcement. Contact your IBM representative or IBM Business Partner for a current list of technology packs as appropriate.

Wireless:

```
Aircell ABS
Aircell IP
Aastra MX-One
Custom Data Storage
Ericsson MSN
GPRS Vendor Neutral
GSM Vendor Neutral
Intervoice PrePaid
Intervoice SMS-C 7
Nokia SMSC
Nokia WAP
Tekelec Eagle5 STP 37.6.0
UMTS Vendor Neutral
```

Technology Pack Tier 5: IBM has assigned each IBM Netcool Performance Manager Technology Pack to a Technology Pack Tier based on price. This list is accurate as of the date of this announcement. Contact your IBM representative or IBM Business Partner for a current list of technology packs as appropriate.

Wireline:

```
Nortel CS2K
```

Wireless:

```
Ericsson IMS
```

Pricing example

A customer acquires one Base license (application instance) of the IBM Tivoli Netcool Performance Manager to manage their wireline network.

The customer also wants to manage one Alcatel 5620 NM Element Management System (EMS), 400,000 carrier VoIP phones, and 20 large branch routers (managed by the EMS). In addition, the customer also wants to deploy one instance of Real Time Reports for Wireline.

```
                                            Instances  Resource
                                            required,  Value Units
                                            quantity   required,
Chargeable                      Quantity in of part    quantity of
component                       customer    numbers    part numbers
metric                          environment to order   to order

Base per instance                   1          1
Tech Pack Tier 3 per
 instance ***                        1          1
Resource Value Unit             405,000 *                18,000 **
Realtime Reports per instance        1          1
 for wireline


*    Per the Points table above, 400,000 phones and
     20 large branch routers total 405,000 points.

**   405,000 points requires 18,000 RVUs per VUE 002 Table F
     (60,000*0.05 + 240,000*0.045 + 105,000*0.040).
     Device RVU quantity (part number quantity) to order is 18,000.
```

```
*** The Alcatel 5620 EMS requires a Technology Pack (Tier 3) but is
    not counted as an "entity." Only the devices managed through the
    EMS are counted as entities (20 large branch routers in this
    example) and participate to the points and RVU total.
```

In a future period, the same customer wants to add support for Ericsson BSS and
Ericsson NSS to IBM Tivoli Netcool Performance Manager to also manage their
30,000 cell wireless network. The customer is deploying an additional database,
but there is no need for an additional Base license because the customer is already
entitled to the Base license for the entire IBM Tivoli Netcool Performance Manager
solution.

However, the customer must purchase licenses for one Ericsson NSS and one
Ericsson BSS Technology Pack to manage 30,000 cells.

```
                                               Instances   Resource
                                               required,   Value Units
                                               quantity    required,
Chargeable                        Quantity in  of part     quantity of
component                         customer     numbers     part numbers
metric                            environment  to order    to order

Tech Pack Tier 2 per instance          2           2
Resource Value Unit              2,100,000 ****            63,900 *****
```

```
****  Per the Points table above, 30,000 cells total
      2,100,000 points.
```

```
***** 2,100,000 points managed, requires 63,900 RVUs per VUE 002
      Table F (195,000*0.04 + 600,000*0.035 + 600,000*0.03 +
      600,000*0.025 + 105,000*0.02).  The RVU quantity (part
      number quantity) to order is 63,900.  The calculation of
      those required RVUs begins at the 0.04 factor level due
      to the customer's previous purchase requiring RVUs to
      entitle the customer to 405,000 points.  This allows the
      customer the additional benefit of volume scaling for the
      RVUs already purchased.
```

```
After these two license orders, the customer would have purchased the
following:
```

```
Product                                             Quantity

IBM Tivoli Netcool Performance Manager Base per Application
 Instance                                                  1
IBM Tivoli Netcool Performance Manager Base per RVU     81,900
IBM Tivoli Netcool Performance Manager Tech Pack Tier 2 Per
 Application Inst                                           2
IBM Tivoli Netcool Performance Manager Tech Pack Tier 3 Per
 Application Inst                                           1
IBM Tivoli Netcool Performance Manager Tech Realtime Reports
 for Wireline per Application Instance                      1
```

Ordering information

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

These products may only be sold directly by IBM or by authorized IBM Business
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For more information about IBM Software ValueNet, visit

   http://www-01.ibm.com/software/lotus/passportadvantage/
   IBM_SW_ValueNet.html

To locate IBM Business Partners for Software ValueNet in your geography for a
specific Software ValueNet portfolio, contact your IBM representative.

```
Product group: Netcool Performance Manager
  Product Identifier Description            (PID)
  IBM Tivoli Netcool Performance Manager    5724-W86
```

```
Product category: Netcool Performance Manager
```

The programs in this announcement all have Value Unit-Based pricing.

```
Program
number      Program name        Value Unit exhibit

5724-W86    IBM Tivoli Netcool      VUE002
            Performance Manager
            V1.3
```

Value Unit exhibit VUE002

See the Licensing metric definitions and pricing examples section.

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.

```
Media Pack              Part
Entitlement             number

Netcool Performance     AL013EN  IBM Tivoli Netcool Performance
 Manager Base per                Manager V1.3 Base Multiplatform
 Application Instance            English Media Pack

Netcool Performance     AL013EN  IBM Tivoli Netcool Performance
 Manager Base per                Manager V1.3 Base Multiplatform
 Resource Value Unit             English Media Pack

Netcool Performance     AL014EN  IBM Tivoli Netcool Performance
 Manager Techpacks               Manager V1.3 Tech Packs
 Tier 1 per                      Tier 1 Multiplatform
 Application Instance            English Media Pack

Netcool Performance     AL015EN  IBM Tivoli Netcool Performance
 Manager Techpacks               Manager V1.3 Tech Packs
 Tier 2 per                      Tier 2 Multiplatform
 Application Instance            English Media Pack

Netcool Performance     AL016EN  IBM Tivoli Netcool Performance
 Manager Techpacks               Manager V1.3 Tech Packs
 Tier 3 per                      Tier 3 Multiplatform
 Application Instance            English Media Pack

Netcool Performance     AL017EN  IBM Tivoli Netcool Performance
 Manager Techpacks               Manager V1.3 Tech Packs
 Tier 4 per                      Tier 4 Multiplatform
 Application Instance            English Media Pack

Netcool Performance     AL018EN  IBM Tivoli Netcool Performance
 Manager Techpacks               Manager V1.3 Tech Packs
 Tier 5 per                      Tier 5 Multiplatform
 Application Instance            English Media Pack

Netcool Performance     AL013EN  IBM Tivoli Netcool Performance
 Manager Data Access             Manager V1.3 Base Multiplatform
 API Wireline per                English Media Pack
 Application Instance

Netcool Performance     AL013EN  IBM Tivoli Netcool Performance
 Manager RealTime Reports        Manager V1.3 Base Multiplatform
 for wireline Per                English Media Pack
 Application Instance
```

Current licensees

Current licensees, with support in effect, will receive instructions on how to order this update.

Current licensees of IBM Tivoli Netcool Performance Manager can order the new distribution medium via MES by specifying the desired distribution medium feature number.

New licensees

Orders for new licenses will be accepted now.

Shipment will begin on the planned availability date.

Basic license

Ordering information for Passport Advantage

Passport Advantage allows you to have a common anniversary date for Software Subscription and Support 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 12 full months of Software Subscription and Support. Software Subscription and Support in the second year (the first year of renewal) can be prorated to be coterminous with your common anniversary date. Thereafter, all Software Subscription and Support will renew at the common anniversary date for 12 full months of maintenance.

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The quantity to be specified for the Passport Advantage part numbers in the following table is per number of required Value Units. To order for Passport Advantage, specify the desired part number and quantity.

```
                                                  Part
Description                                       number

IBM Tivoli Netcool Performance Manager V1.3  PID 5724-W86PA licenses

NETCOOL PERFORMANCE MANAGER BASE PER APPLICATION  D06VLLL
 INSTANCE LIC + SW S&S 12 MO
NETCOOL PERFORMANCE MANAGER BASE PER APPLICATION  E060BLL
 INSTANCE ANNUAL SW S&S RNWL
NETCOOL PERFORMANCE MANAGER BASE PER APPLICATION  D06VMLL
 INSTANCE SW S&S REINSTATE 12 MO
NETCOOL PERFORMANCE MANAGER BASE PER RESOURCE     D06VNLL
 VALUE UNIT LIC + SW S&S 12 MO
NETCOOL PERFORMANCE MANAGER BASE PER RESOURCE     E060CLL
 VALUE UNIT ANNUAL SW S&S RNWL
NETCOOL PERFORMANCE MANAGER BASE PER RESOURCE     D06VPLL
 VALUE UNIT SW S&S REINSTATE 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 1      D06V9LL
 APPLICATION INSTANCE LIC + SW S&S 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 1      E0605LL
 APPLICATION INSTANCE ANNUAL SW S&S RNWL
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 1      D06VALL
 APPLICATION INSTANCE SW S&S REINSTATE 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 2      D06VBLL
 APPLICATION INSTANCE LIC + SW S&S 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 2      E0606LL
 APPLICATION INSTANCE ANNUAL SW S&S RNWL
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 2      D06VCLL
```

```
                    APPLICATION INSTANCE SW S&S REINSTATE 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 3          D06V5LL
 APPLICATION INSTANCE LIC + SW S&S 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 3          E0603LL
 APPLICATION INSTANCE ANNUAL SW S&S RNWL
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 3          D06V6LL
 APPLICATION INSTANCE SW S&S REINSTATE 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 4          D06V7LL
 APPLICATION INSTANCE LIC + SW S&S 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 4          E0604LL
 APPLICATION INSTANCE ANNUAL SW S&S RNWL
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 4          D06V8LL
 APPLICATION INSTANCE SW S&S REINSTATE 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 5          D06V1LL
 APPLICATION INSTANCE LIC + SW S&S 12 MO
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 5          E0601LL
 APPLICATION INSTANCE ANNUAL SW S&S RNWL
NETCOOL PERFORMANCE MANAGER TECHPACKS TIER 5          D06V2LL
 APPLICATION INSTANCE SW S&S REINSTATE 12 MO
NETCOOL PERFORMANCE MANAGER DATA ACCESS API           D06VDLL
 WIRELINE APPLICATION INSTANCE LIC + SW S&S
 12 MO
NETCOOL PERFORMANCE MANAGER DATA ACCESS API           E0607LL
 WIRELINE APPLICATION INSTANCE ANNUAL SW S&S
 RNWL
NETCOOL PERFORMANCE MANAGER DATA ACCESS API           D06VELL
 WIRELINE APPLICATION INSTANCE SW S&S REINSTATE
 12 MO
NETCOOL PERFORMANCE MANAGER REAL TIME REPORTS         D06VJLL
 WIRELINE APPLICATION INSTANCE LIC + SW S&S
 12 MO
NETCOOL PERFORMANCE MANAGER REAL TIME REPORTS         E060ALL
 WIRELINE APPLICATION INSTANCE ANNUAL SW S&S
 RNWL
NETCOOL PERFORMANCE MANAGER REAL TIME REPORTS         D06VKLL
 WIRELINE APPLICATION INSTANCE SW S&S REINSTATE
 12 MO
```

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

```
                                                  Part
Description                                       number

IBM Tivoli Netcool Performance Manager V1.3
 Base Multiplatform English Media Pack            AL013EN
IBM Tivoli Netcool Performance Manager V1.3
 Technology Packs Tier 1 Multiplatform English
 Media Pack                                       AL014EN
IBM Tivoli Netcool Performance Manager V1.3
 Technology Packs Tier 2 Multiplatform English
 Media Pack                                       AL015EN
IBM Tivoli Netcool Performance Manager V1.3
 Technology Packs Tier 3 Multiplatform English
 Media Pack                                       AL016EN
IBM Tivoli Netcool Performance Manager V1.3
 Technology Packs Tier 4 Multiplatform English
 Media Pack                                       AL017EN
IBM Tivoli Netcool Performance Manager V1.3
 Technology Packs Tier 5 Multiplatform English
 Media Pack                                       AL018EN
```

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```
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Corrections

(Corrected on December 6, 2011)

The Hardware requirements section was revised.