



Highlights

- Gain a competitive advantage by quickly supporting advanced service offerings using TNPM's extensive "off-the-shelf" technology pack library
 - Proactively monitor and predict important trends to help improve network utilization and increase productivity
 - Help minimize service degradations, disruptions, and time-consuming troubleshooting with performance, usage, and network health information that can be shared with appropriate personnel across the organization
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IBM Tivoli Netcool Performance Manager

Performance management for wireless, wireline and convergent networks

IBM Tivoli® Netcool® Performance Manager (TNPM) enables communication service providers, enterprises, and utilities to manage network performance of both fixed and mobile networks. It provides a comprehensive, flexible and scalable performance management system that supports complex, multivendor, multitechnology networks while providing increased visibility into total network performance.

With Tivoli Netcool Performance Manager, customers can consolidate performance management of both wireless and wireline/IP-based networks to a single vendor solution for lower cost of ownership. The solution enables organizations to move toward convergence and next-generation networks at their own pace—while continuing to support existing mature technologies.

Manage both wireless and fixed/IP network performance

Tivoli Netcool Performance Manager includes an extensive library of "off-the-shelf" network interfaces called technology packs, which can be quickly deployed, extended, and modified to manage different vendors and technologies on a single system. These independent modules provide domain-specific and vendor-neutral data models, vendor-specific metrics and key performance indicators (KPIs), and value-added reports and graphs.



Tivoli Netcool Performance Manager technology packs are available for wireless technologies such as:

- Global System for Mobile (GSM)
- General Packet Radio Service (GPRS)
- Enhanced Data rates for GSM Evolution (EDGE)
- Universal Mobile Telecommunication System (UMTS)
- High-Speed Packet Access (HSPA)
- Evolved High Speed Packet Access (HSPA+)
- Code Division Multiple Access Single Carrier Radio Transmission Technology (CDMA/1xRTT)
- Evolution, Data Optimized (EVDO)

And fixed/IP services and technologies such as:

- Long Term Evolution (LTE)
- Metro/Carrier Ethernet
- Cable
- Broadband Access
- QOS network traffic management
- Latency/jitter
- Flow monitoring (IPFIX, apps)
- Access (DSL, GPON, CMTS, MSAN, Wimax)
- MPLS
- Carrier VoIP (MGW, MGC, etc.)
- IP telephony (Call managers)
- IPTV (probes, PEVQ, IP Mcast, Video servers)
- IMS (CSCF/BGCF, MGW, AS, MGC, MGW)
- Transmission (e.g. SDH, SONET, DWDM)

The IBM Tivoli Netcool Technology Program (TNTP), an interoperability program with network equipment providers (NEPs), helps IBM provide “out-of-the-box” integration and technology pack upgrades that follow NEPs release cycles for faster deployment and return on investment.

We also offer the Technology Pack Development Kit (TPDK) to enable customers or partners to develop customized wireless Technology Packs and Tech Packs for diverse additional network element types, e.g. for value added services. IBM uses the same toolkit internally to develop Commercial-Off-the-Shelf (COTS) Tech Packs. Customer/partner developed Tech Packs can be deployed on the same TNPM wireless system as IBM delivered COTS solutions.

Gain greater visibility into network performance

With operational views streamlined for managing the network using real-time data and a separate reporting module for creating ad hoc, state-of-the-art displays, Tivoli Netcool Performance Manager provides greater visibility into network performance. Both engineers and executives can utilize the large library of preconfigured calculations and KPIs in wireless or wireline, vendor-neutral or multivendor reports or create new reports and graphs using an innovative reporting engine, Tivoli Common Reporting (TCR) based on Cognos®.

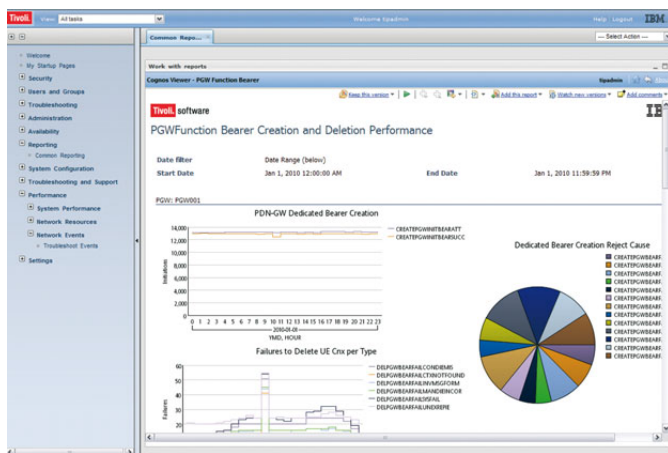
Enhanced reports using Cognos offer additional business intelligence and enable a consistent user experience across the broad Tivoli Software solution portfolio. Through the Cognos Framework Manager, you can create a business-oriented reporting data model for a technology or vendor containing reporting entities and their mappings to the underlying wireline/fixed/IP or wireless/mobile database schema (technology pack).

For managing the overall network with end-to-end KPIs and the information needed to compare the performance of components from different vendors, Tivoli Netcool Performance Manager allows service providers to define cross-technology and cross-vendor KPIs, using counters provided by a specific vendor or other counters that are vendor-neutral.

In addition, Tivoli Netcool Performance Manager provides a feature called composite resources for creating network and service models to report on logical entities or end-to-end network paths. For instance, composite resources can be used to measure link availability or latency across a virtual private network based on the relationship between physical resources. This ability provides a much more powerful way of looking at network and service quality than performance metrics on individual resources alone and can be used to enhance alarm definitions, network troubleshooting, and service quality reports.

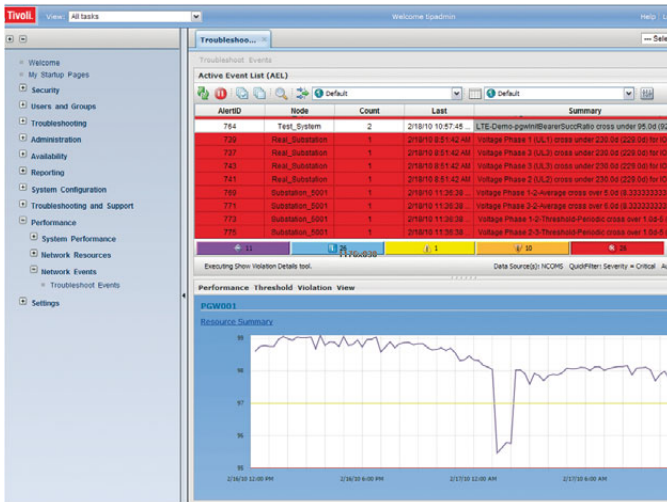
View operational and performance data through a single pane of glass

Tivoli Netcool Performance Manager delivers network intelligence not only to network operations but also to other business management functions to facilitate improved decision making. While network operators review and troubleshoot detailed, low-level, network information through operational views, capacity managers can use trending and forecasting reports to plan for demand and growth. Executives can use performance data to make critical business decisions, view a national scorecard made up of key KPIs across each region, and validate their investments in the network. Similarly, external customers can view reports to assess the quality of the network provided by the service provider. These reports and views are available through the Tivoli Integrated Portal (TIP) or can be scheduled and delivered in a variety of formats such as .pdf, .xls, .csv, .xml, etc.



If you prefer to work with report data in another context, Tivoli Netcool Performance Manager can easily export KPI values to any reporting tool or database in a variety of formats such as Microsoft® Excel, comma-separated values (CSV), plain text and others. The Mass Data Export interface enables you to efficiently share relevant performance management data across multiple network and business operations teams, replacing time-consuming manual processes with automated procedures.

IBM Tivoli Netcool Performance Manager report rendered in the Tivoli Integrated Portal console. This performance report is based on the new Tivoli Common Reporting engine.



A view of the IBM Tivoli Integrated Portal (TIP) which consists of an event list and a performance view of the resources causing the events. The performance view provides the context of the resource and KPI which breached the threshold as well as how the resource is performing prior to the alarm and up to the current point in time.

Control the timeliness of your data with streaming analytics

To help maintain high-quality service experiences for your customers and deploy new services effectively, Tivoli Netcool Performance Manager enables you to identify anomalies in near-real time, troubleshoot and test using custom reports and ad hoc queries, and immediately review the results of corrective action.

Tivoli Netcool Performance Manager also provides historical hourly, daily, weekly and monthly analysis, which is critical to help optimize long-term network performance and quality. For wireline environments, the system uses streaming analytics to provide powerful aggregation capabilities that allow users to analyze, drill down, and roll up data in real time.

Additionally, performance-based alarms can be fully configured to notify the appropriate staff about potential problems identified by any measured or calculated parameter, including a baseline identified by applying standard deviations to performance data. User-defined thresholds can be applied against report data to proactively generate alarms, which can automatically be routed to fault management systems such as IBM Tivoli Netcool/OMNIBus.

Help reduce operating costs and headaches through automation

Tivoli Netcool Performance Manager helps enhance change management capabilities by delivering built-in policies that automatically detect system changes such as:

- Resource adds, deletes and changes.
- Failovers.
- Automatic grouping of resources by location, business unit or other criteria.
- Auto detection of new cells and other network resources.

When an event or fault occurs, Tivoli Netcool Performance Manager can then automatically send a notification to Tivoli Netcool/OMNIbus, which uses the information to help deliver continuous uptime of services and applications. Detected changes can also be sent to the inventory system for reconciliation.

Powerful architecture delivers lower cost of ownership

The fully distributed and robust architecture with independent component scalability (application, database, loaders) and deployment options helps save on operating costs and capital expenditures. Further, Tivoli Netcool Performance Manager will run as part of a cost-effective platform using IBM AIX® on IBM System p® including POWER7™, Red Hat Linux® (RHEL) on IBM BladeCenter® and IBM System x® hardware in addition to Sun Solaris.

Conclusion

Tivoli Netcool Performance Manager can deliver seamless aggregation and correlation of data from multivendor multi-technology networks, calculating key performance metrics for lower cost network performance management and optimization. It's the performance management solution with proven scalability and flexibility required to deploy next-generation services and help maintain a competitive edge in the marketplace. When combined with other products in the IBM Tivoli Netcool portfolio, customers gain a complete service management solution for end-to-end fault and service assurance.

Tivoli Netcool Performance Manager at a glance

Operating systems:

Solaris 10 (SPARC)

Red Hat Enterprise Linux 5 - x86 64 bit (Tivoli Netcool Performance Manager wireless component—all components; Tivoli Netcool Performance Manager wireline component—SNMP data collector only)

AIX 5.3 or 6.1 (IBM System p, such as POWER7)—(Tivoli Netcool Performance Manager wireline component only)

For more information

To learn more about IBM Tivoli Netcool Performance Manager, please contact your IBM representative or IBM Business Partner, or visit

ibm.com/tivoli/products/netcool-performance-mgr

IBM Tivoli Netcool Performance Manager is backed by world-class IBM Services, IBM Support and an ecosystem of IBM Business Partners.



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