

Netcool/Proviso

Highlights

- Improve and maintain service quality with real-time monitoring of service level agreements (SLAs) and key performance indicators (KPIs)
- Consolidate monitoring tools to streamline operations and help reduce training time
- Gain a competitive advantage by quickly supporting new service offerings, including virtual private networks (VPNs) and Voice over Internet Protocol (VoIP)
- Help maximize customer satisfaction with a comprehensive, customer-facing report portal
- Help minimize costs of service degradations, disruptions and time-consuming troubleshooting with performance and usage information
- Leverage powerful architectural scale and automation abilities for capital and operating expense savings

In the fiercely competitive service provider marketplace, traditional services are commoditized and competition and customer demand are driving prices downward. To stay at the forefront and to retain and attract new customers, it is crucial to continually introduce next-generation services and do so with the highest levels of availability, reliability and performance. End-to-end performance management, especially when offering bundled services, is essential but challenging.

In the past, service providers were forced to manage a multitude of data points to maintain quality — a substantial burden on already overtaxed IT operations. Now, a new consolidated, service-centric view is emerging to increase service agility and deliver quality while helping to reduce costs.

Netcool®/Proviso® delivers a single tool with carrier-class performance management, monitoring and reporting.

Its scalable, flexible architecture enables you to effectively consolidate management to increase agility and help cut costs.

Improve service quality with a comprehensive view

The proliferation of products and services that providers offer every day — and continue to introduce to the marketplace — makes it imperative that you have a view of all the services you provide, end to end.

Netcool/Proviso gives you the ability to monitor a variety of KPIs from multiple technology domains — including voice, video and data, network, hosts and applications — across varying lines of business under a “single pane of glass” view, so you can effectively monitor service quality across your infrastructure. Netcool/Proviso also allows you to trend KPIs, predict and avoid problems — or access data in real time for troubleshooting.

The flexible data collection and modeling capabilities of Netcool/Proviso allow you to easily pull from a variety of sources, including:

- Simple network management protocol (SNMP) agents embedded in resources.
- Bulk statistics from network management systems (NMS) and element management systems (EMS).
- Call detail records (CDRs) from softswitches.

Netcool/Proviso allows you to manage your services as needed, immediately address service issues, plan for fluctuations in demand and traffic flow, and seamlessly react to unforeseen changes. This helps reduce the strain on your staff due to monitoring and maintenance of multiple, separate tools.

Adhere to SLAs

In complex environments, operators need more than just a complete view of the environment. Netcool/Proviso has dynamic data aggregation and reporting capabilities that enable you to correlate data across domains to provide a service-centric view. You can organize KPI data to model the service, create service-centric views and manage that data against SLA thresholds, by customer or by service.

It also lets you drill down to real-time resource monitoring for fast

troubleshooting. By predicting, avoiding and rapidly resolving service level violations, you are helping avoid costly penalties for violating SLAs.

For organizations offering tiered services, Netcool/Proviso lets you offer varied service levels, using business logic to support your SLA thresholds and report packages.

Consolidate operations support systems (OSS) to speed services to market and simplify service monitoring

Staying a step ahead of the competition is imperative — and complicated. Many service providers are streamlining and consolidating OSS to support and roll out new services more quickly. This is challenging in the face of separate service add-ons, mergers, acquisitions and globalization. Netcool/Proviso delivers the scalability and flexibility to aggregate and centrally view this information, enabling you to more quickly support new services and future technologies, including:

- New devices.
- New service models.
- New reports.

Netcool/Proviso helps you transition away from inconsistent, stand-alone performance monitoring systems,

to leverage on demand reporting capabilities that offer immediate insight into your infrastructure from all angles. OSS consolidation also presents tremendous potential cost savings, by minimizing your monitoring tools, the complexity of your monitoring process and the amount of valuable staff time needed.

Facilitate IP-virtual private network (VPN) service offerings

Increasingly, companies use IP-VPNs to securely extend coverage and reduce wide area network (WAN) costs. Yet the multiprotocol label switching (MPLS) and quality of service (QoS) technologies needed to facilitate IP-VPNs and VoIP bring about two significant challenges: monitoring new virtual elements such as label switched paths (LSPs) and class of service (CoS) policies, and monitoring metrics such as latency and packet loss. Netcool/Proviso facilitates IP-VPN service offerings by:

- Delivering a library of out-of-the-box monitoring support from leading vendors, including Alcatel, Cisco, Huawei and Juniper Networks.
- Supporting end-to-end measurements for latency and packet loss.
- Correlating data into views per service, customer, site and other user-defined criteria.
- Giving you robust change management capabilities.

Netcool/Proviso gives you visibility into QoS and applications, and correlates that data to help with capacity planning and problem avoidance.

Quickly roll out VoIP services and effectively manage quality

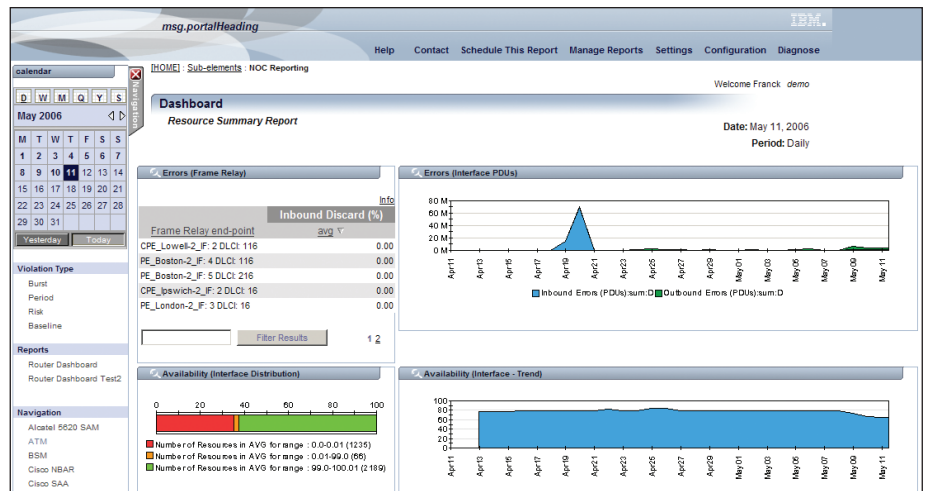
Many service providers are rushing to offer VoIP services — both to take advantage of cost savings that this technology affords and to roll out popular service offerings and bundles. But effectively monitoring VoIP quality has typically been difficult at best.

Netcool/Proviso offers the flexibility to manage VoIP across multiple domains to give you a holistic picture of capacity, usage patterns and problems in your network, and help ensure service quality. Domains include:

- Service delivery platform (SDP): media servers, application servers, media gateway controllers.
- Central office: media gateways, session border controllers.
- Customer premises equipment (CPE): multi-media terminal adapters (MTAs), mobile phone quality of experience (QoE) monitoring.

Netcool/Proviso provides insight into VoIP key quality indicators (KQIs), including:

- Voice quality: mean opinion score (MOS), signal-to-noise ratio (SNR), delay, echo return loss.



Netcool/Proviso on demand and real-time reports help manage capacity, avoid and resolve problems.

- Call signaling: call completion rate, answer seizure ratio (ASR), drop call rate, tear down delay.
- Network impairments: jitter, packet loss, unsequenced packets.
- Network diagnostics: local area network (LAN), router and access congestion, and impairment due to jitter.

Superior monitoring capabilities deliver a complete picture of VoIP quality and usage, allowing you to quickly roll out new VoIP services. Later, you can use reports to immediately gather real-time data on service and voice quality, volume fluctuations and so on — and fine-tune as needed.

Robust reports help improve service quality

A functional and secure Web portal for global reporting across multiple

services and technologies allows you to gain a comprehensive overview of your infrastructure, aid in troubleshooting and even get warnings about potential problems — as well as use this information to prevent future problems. Reports can be generated historically or in an on demand way and include both baseline calculations and forecasting. And by integrating Netcool/Proviso with your inventory and provisioning systems, you can use it to improve inventory accuracy and models, as well as enrich reports with customer and service information.

The flexible architecture enables you to extensively customize reports to meet business objectives. Reports can be scheduled to e-mail directly to your customer or account team for review, so you can react to quality

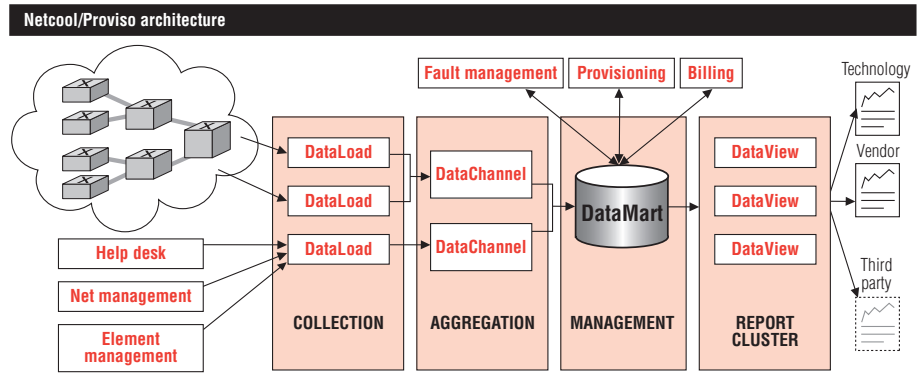
issues before they become customer satisfaction issues.

Deliver accurate, customer-facing reports in a protected fashion

User-friendly, customer-facing reports in Netcool/Proviso help demonstrate that you are consistently providing high-quality service, which aids in retention and cross-selling. The software continuously aggregates data to put accurate, current reports right at your customers' fingertips — even on bundled services. Sharing this information with customers when they need it helps assure end users of ongoing service quality, which helps bring a faster end to potential disputes. Strong change management features ensure that even if resources change midmonth, your reports remain accurate and secure.

Self-service features contribute to the zero-touch operation of Netcool/Proviso. Through the portal, customers can:

- Rename resources to make reports easier to read.
- Configure and initiate end-to-end latency tests.
- Activate real-time, one-second poll and scroll monitoring.
- Export data in CSV format for analysis in their own tools.



Bundle advanced reporting capabilities with premium services or charge separately for them.

Help reduce operating costs and headaches through automation

Maintaining monitoring tools has historically been an administrative headache. As changes to the network are made or new customers and services are provisioned, they must be reflected and adjusted in the monitoring tool. If not, that service might be monitored poorly, or not at all. Netcool/Proviso helps enhance your change management capabilities by delivering built-in policies that can automatically detect system changes, further conserving time that can be put to better use managing the network instead of the toolset.

Netcool/Proviso change management automatically helps preserve SLA and reporting accuracy, and conserves

administration time by reducing manual updates for:

- Resource adds, deletes and changes.
- New or changed customer and service deployments.
- Router reboots that force the reindexing of all the interfaces.
- Failovers.
- Automatic grouping of resources by location, business unit or other criteria.

Netcool/Proviso configures itself to monitor as changes are made, providing a single, service-centric view. When an event or fault occurs, Netcool/Proviso can then send a notification to Netcool/OMNIBus™, which uses the information to help you deliver continuous uptime of services and applications. Detected changes can also be sent to the inventory system for reconciliation.

Powerful architecture delivers broad capabilities

The robust architecture of Netcool/Proviso includes modules and application packs that deliver complete monitoring and reporting and help you save on operating costs and capital expenditures.

Netcool/Proviso modules

- *Netcool/Proviso DataLoad* — discovers resources and collects detailed data.
- *Netcool/Proviso DataChannel* — continuously calculates KPIs and KQIs for customer, service, site and other user-defined groups.
- *Netcool/Proviso DataMart* — the central repository for all data that automates daily additions, changes and deletions of resources, customers and services.
- *Netcool/Proviso DataView* — generates security-rich, real-time reports, from customer-facing to granular, internal views.

Application packs

Choose from a broad range of application packs to extend these modules and get out-of-the-box discovery, monitoring and reporting, including:

- Infrastructure: Alcatel 5620NM, Cisco, Cisco WAN Manager, Huawei, Juniper Networks, Riverstone, ATM, Frame Relay.

Netcool/Proviso at a glance

Netcool/Proviso is designed to work with Netcool/OMNIBus. It supports the following platforms:

- IBM AIX® 5.3 (for DataLoad, DataChannel and DataMart modules)
- Sun Solaris 9
- Oracle 9i (9.2.0.6), Enterprise Edition with partitioning option

- Transmission: Ciena, Huawei T2000.
- MPLS and Metro Ethernet: Alcatel 5620SAM, Cisco, Huawei, Juniper Networks, LSR, TE.
- Access broadband and MSAN: Alcatel DSL, Huawei N2000 MSAN, Fujitsu MSAN, Nokia D500, Redback SE800.
- QoS and latency: Cisco CB QoS & IP SLA, Huawei Ping, Juniper Networks RPM, DISMAN Ping.
- Flow: Cisco NBAR, IP Multicast, Huawei Netstream.
- VoIP: ACME Packet, Alcatel, BRIX, Convedia, Cisco IPT, Nortel CS2K & MG9000, Radcom OmniQ, Siemens HiQ, Tekelec.
- Applications: Netcool/ASMs™ and Netcool/SSMs™, Radius client/server accounting and authentication, IneoQuest IPTV.

Conclusion

Netcool/Proviso helps you deliver superior service quality while containing your costs. It's the performance management solution with the scalability and flexibility required to deploy

next-generation services and help you maintain a competitive edge in the marketplace. Netcool/Proviso provides you with the flexible, global view that you need to bring points of data into a consolidated display that is customer and service-centric.

And, when combined with other products in the IBM Tivoli® Netcool portfolio, customers gain a complete service management solution for end-to-end fault and performance monitoring.

For more information

To learn more about how Netcool/Proviso can help you achieve carrier-class service quality and performance management, contact your IBM representative or IBM Business Partner, or visit ibm.com/software/tivoli



About Netcool software

The IBM Tivoli Netcool software portfolio is used by many of the world's leading enterprise, service provider and government organizations for its ability to consolidate and manage events across some of the largest, most complex, heterogeneous environments. The Tivoli Netcool software portfolio offers broad collection, consolidation and correlation capabilities to help organizations rapidly identify and resolve problems and improve operational efficiency. By combining real-time service modeling and impact analysis capabilities with scalable fault management, the Tivoli Netcool software portfolio helps organizations to effectively manage the availability, performance and security of business applications and services.

About Tivoli software from IBM

Tivoli software provides a comprehensive set of offerings and capabilities in support of IBM Service Management, a scalable, modular approach used to deliver more efficient and effective services to your business. Meeting the needs of any size business, Tivoli software enables you to deliver service excellence in support of your business objectives through integration and automation of processes, workflows and tasks. The security-rich, open standards-based Tivoli service management platform is complemented by proactive operational management solutions that provide end-to-end visibility and control. It is also backed by world-class IBM Services, IBM Support and an active ecosystem of IBM Business Partners. Tivoli customers and partners can also leverage each other's best practices by participating in independently run IBM Tivoli User Groups around the world — visit www.tivoli-ug.org

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