

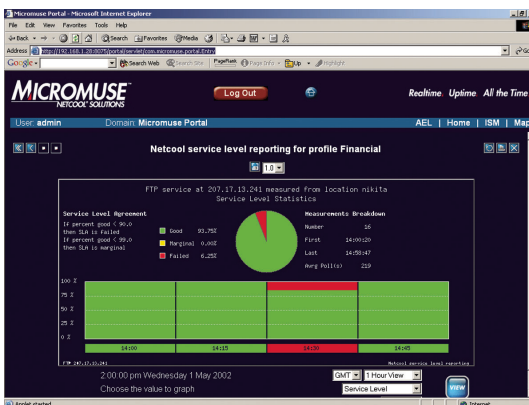
NETCOOL®/ISMS™

END-TO-END SERVICE ASSURANCE FOR BUSINESS APPLICATIONS

THE NEED FOR END-TO-END SERVICE ASSURANCE

For most organizations, applications represent a vital lifeline to revenue. Whether they are customer facing eCommerce systems, or operations workflow tools, applications play an undeniable role in business success or failure. For IT organizations working with tight budgets and limited resources, the challenge is how to assure high service availability and quality of service (QoS) to both internal and external consumers.

Business infrastructures continue to grow in complexity and scale, as do the mix of web-based, client-server, legacy and homegrown applications that must be managed. Add to this the interdependence of application, system, network, and other infrastructure resources, and assuring high service availability and quality of service seems like an insurmountable task. The ability, therefore, to understand the health of a transaction from end-to-end has become more vital than ever for assuring high QoS to the consumer.



One of the key features of Netcool/ISMS for service providers is its reporting capabilities. Each Internet service can be broken down to ascertain the service-level performance and compare against SLAs.

NETCOOL/INTERNET SERVICE MONITORS

Netcool®/Internet Service Monitors™ (Netcool/ISMS™) are designed to monitor the availability, response time, and usability of a wide range of business services, including virtually any browser-based or client-server applications and systems. With the ability to automatically monitor complete end-to-end transactions, Netcool/ISMS provide highly scalable service assurance, enabling businesses to improve overall quality of service (QoS), operate more efficiently and adhere to competitive Service Level Agreements (SLAs).

With support for over 22 Internet protocols, Netcool/ISMS are used by hundreds of Service Providers and Enterprises for rapid deployment of emerging technologies including Voice over IP, Application Hosting, eCommerce and enterprise portals.

Netcool/ISMS are highly scalable and can support thousands of tests from a single monitor which is why leading organizations, including Cable & Wireless, Verio, PSINet, Charles Schwab and UUNET rely upon them to ensure the uptime and performance of their Internet and IP-based applications and services.

REALTIME USER-SIDE TRANSACTION MONITORING

Out of the box, Netcool/ISMS provide realtime monitoring for over 22 Internet protocols and applications. They provide user-side monitoring by performing "simulated transactions" – acting just like a customer or end-user. Instead of passively waiting for alarms, Netcool/ISMS proactively log in to a URL and perform an end-to-end transaction enabling operations teams to monitor services in realtime and provide answers to the following questions:

- > Is the service available and is it meeting the defined SLA?
- > Is the service usable or is the capacity being exceeded?
- > Is the content correct and are transactions running smoothly?

Comprised of lightweight software modules, Netcool/ ISMS can be quickly and easily deployed to any location – for a complete view of service availability and performance.

Netcool/ISMS enable centralized configuration and management of even the largest distributed environments. Built for flexible monitoring, Netcool/ISMS allow for scheduled "black-out" periods, when monitoring is automatically deactivated.

CUSTOMIZABLE SERVICE LEVEL DEFINITION

Netcool/ISMS let you define what comprises a service level by grouping tests together. The status tests can be stored and based on response time, content matches and many other values. Each level of service can depend on as many of these tests as required. It confirms service failure by quickly re-testing the service like a customer would – eliminating event messages caused by blips. This feature helps operators concentrate on resolving real problems and avoid chasing phantom alarms. In addition, SLA reports more accurately reflect true service availability.

WEB-BASED SLA REPORTING AND ANALYSIS

Netcool/ISMS show the configuration of service tests and Web-based historical performance reports via the Java "ISMServer" Web Interface. Operators can compare and analyze the relative performance of multiple Internet services in one graphic report and measure them against service level agreements. They also provide "one click" access to performance reports from different monitoring locations. Service providers can then offer these Web-based reports to their customers to differentiate service offerings and show compliance to SLAs.

Netcool/ISMS provide reports that let you view segments of service tests over any given time period. This detailed information helps you determine the changes or technology investments that would improve quality of service. Reports show you how long it takes customers to download Web pages, or page components (adverts, images, applets, frames) to determine response time for each step or the entire transaction. The reports allow you to effectively monitor performance trends for proactive planning and management.

RELATIONSHIP WITH THE NETCOOL SUITE: END-TO-END SERVICE MANAGEMENT

When Netcool/ISMs are combined with Micromuse's flagship Netcool/OMNibus™ application, you gain realtime, end-to-end visibility over end-to-end transactions and the health of individual application, system and network resources. Many Internet monitoring tools only monitor Internet and Web protocols on isolated screens – making it difficult to completely manage the environment. The Netcool/OMNibus application monitors the availability and performance of the entire business infrastructure. And when combined with Netcool/ISMs, you can manage your entire Internet-based IT environment from an end-user perspective.

Netcool/ISMs send data to the Netcool ObjectServer™ – a central, in-memory repository. Centralized information enables you to easily associate and correlate Internet service response time with other Netcool-collected events. This "big picture" view helps operators isolate IT problems that affect service availability or performance and reduce mean-time-to-repair.

NETCOOL/ISMS KEY FEATURES & ENHANCEMENTS

FOUR NEW MONITORS:

- > Windows Application Monitor (formally the WSH Monitor).
- > Cisco SAA Monitor
- > Windows Media Server Monitor
- > RTPS Server Monitor

ENHANCED WEB TRANSACTION MONITORING - The Internet Explorer Recorder Application Plug-in for the Windows Application Monitor enables the recording and monitoring of complex Web transactions. The direct use of Internet Explorer means user experience is accurately replicated. The monitor has access to Internet Explorer functionality for Javascript processing and forward compatibility with future web functionality.

EXTENDED MONITORING ON WINDOWS PLATFORM - The Windows Application Monitor provides a platform for managing Windows based applications. Application Plug-ins can be produced for key enterprise applications. In addition the Monitor is fully scripted, supporting the collection of service performance data from Javascript, VB Script or Perl scripts. Scripts can interact with Windows or Application APIs exposed via the Microsoft COM layer. An integrated editor and debugger simplifies script creation.

CISCO SERVICE ASSURANCE MONITOR - CISCO SAA provides a mechanism for collection of network performance information in real time from routers and switches. The Network statistics that are collected include response time, latency, jitter, packet loss, and website download time. The SAA Monitor automatically configures Cisco devices to perform remote tests capturing the results for reporting and alerting.

DATABASE STORAGE - Monitors can insert data in real-time into RDBMS databases. A published schema enables ad-hoc reporting tools such as Netcool/Reporter to be used to build service performance reports.

HOW THE NETCOOL/ISMS SUITE WORKS

Netcool/ISMs Architecture. Netcool/ISMs are a set of 22 software monitors with unique executable, rules, and property files. They can be easily and economically distributed to a number of points in the business infrastructure – unlike competing solutions that only collect data from a single, central point.

All of the modules within the Netcool/ISMs suite use a reliable message stream (TDS) for feeding event data into the Netcool ObjectServer to guarantee delivery. You can use the command line interface to bulk provision large numbers of tests or integrate with third-party applications. Through the Netcool EventList Console, you can also view a summary of any Internet service and all events underlying that service – based on their status state.

You can apply highly sophisticated SLA definitions for each monitored element using the Service Level Classifications (SLC) feature for expression matching and detailed service response thresholding. The results of each poll can be combined to classify service status as failed, marginal, or good.

Netcool/ISMs also offer Service State change monitoring and can send events to the Netcool ObjectServer only when there is a change in status. This helps operators prioritize activities and allows them to ignore redundant information. All Netcool/ISMs store data locally in an open published XML format for reporting purposes and can be easily integrated into other XML-compatible systems and tools.

BUSINESS BENEFITS

> **INCREASED QUALITY OF SERVICE, QoS.** Combined with the Netcool suite, Netcool/ISMs provide correlation between service performance alerts and faults from the infrastructure. This lets operators focus attention on fixing "service affecting" faults, reducing downtime, and improving overall quality of service.

> **EFFICIENT OPERATIONS MANAGEMENT.** Features such as "Failure Confirmation", the ability to pre-configure "black-out" periods and the ISMServer command line interface help you efficiently manage large-scale Internet operations in realtime. Operators can custom design views of services, enabling them to circumvent service outages.

> **LOW COST OF OWNERSHIP.** Netcool/ISMs can be quickly deployed with "zero footprint". They are easy-to-use and maintain and integrate easily with other systems through a command line interface. Netcool/ISMs can install and generate reports on all existing servers and management domains without requiring changes to a NOC's backbone.

> **STANDARDS-BASED TECHNOLOGY.** Each monitor adheres to the Internet Engineering Task Force (IETF) Request For Comment (RFC) for its protocol, and is based on an open, client-server architecture.

> **SCALABLE ARCHITECTURE.** Scalable, multi-threaded architecture lets the Netcool/ISMs track multiple devices and services of each protocol. As the business infrastructure grows, one Netcool ObjectServer can support hundreds of thousands of events, reducing the maintenance costs associated with managing large-scale Internet services.

OPERATING SYSTEMS SUPPORTED

Sun Microsystems Solaris 2.6, 7 and 8
Redhat Linux 6.0, 6.1, 6.2 and 7.2
Hewlett-Packard HP/UX 11
IBM AIX 4.3.3, 5L
Windows NT 4.0 and 2000

SYSTEM REQUIREMENTS

Netcool/OMNibus 3.4.1 or higher
Java 1.2.2+ virtual machine (for ISMServer component)
Web browser capable of displaying frames

SYSTEM SPECS

VERSION NUMBER: 2.3
RELEASE DATE: June 2003
MINIMUM MEMORY REQUIRED: 128 MB (for full suite)
MINIMUM DISK SPACE REQUIRED: 256 MB (for full suite)
PACKAGE AND UPGRADE DISTRIBUTION: Online

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ABOUT MICROMUSE

Micromuse Inc. (Nasdaq: MUSE) is the leading provider of service and business assurance software. The Netcool® suite is used by Telco, Internet, Broadband, and Wireless service providers, and corporate enterprises worldwide. The company is headquartered in San Francisco, with regional offices across the Americas, Europe, and Asia-Pacific.

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