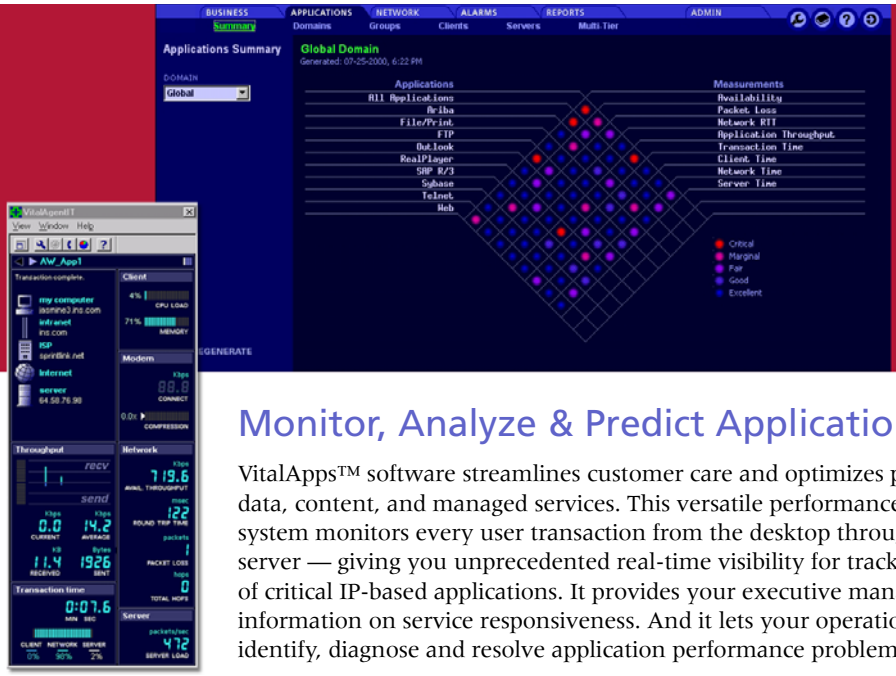
VitalApps™ Application Performance Management Software



VitalApps™ heat charts give you at-a-glance views of application performance and let you easily drill down for more detailed reports.

Monitor, Analyze & Predict Application Behavior

VitalApps™ software streamlines customer care and optimizes performance for broadband, dial, wireless data, content, and managed services. This versatile performance optimization and application correlation system monitors every user transaction from the desktop through the network to the final destination server — giving you unprecedented real-time visibility for tracking, analyzing and predicting the behavior of critical IP-based applications. It provides your executive management with essential overview information on service responsiveness. And it lets your operations, IT and support center staff quickly identify, diagnose and resolve application performance problems and bottlenecks.

Features

- **Patented flow analysis** — provides real-time and historical demarcation of every application transaction by client, network and server time
- **Detailed application measurements** — tracks dial, wireless data, broadband and VPN tunnel setup and usage availability and quality; provides granular views at packet level into e-mail, Java and other mission-critical applications
- **Real-time live user knowledge** — embedded VitalAgent™ client software helps pinpoint application-related issues from live end-users, including live and historical client statistics and session information
- **Non-stop simulated user traffic** — flags problems from strategically placed simulated users for 24x7 proactive optimization of application and service availability
- **Powerful application correlation** — unique heat charts and summary reports isolate trouble spots to maximize service availability
- **Flexible reports** — over 100 standard out-of-the-box reports; can be customized to focus on specific service levels, application sources and users
- **Web-based portal and alarm console** — allows secure access to personalized views of end-to-end application and service performance through award-winning GUI
- **Industry-leading scalability** — monitors service quality across today's largest service provider and managed services environments

Benefits

Lower service call volumes

- Segments problems automatically; facilitates problem isolation across end-user devices, networks, applications, servers and partners
- Pre-empts application problems, reduces the number and duration of tier-1 support calls
- Enables customer self-care: end-user visibility and local problem resolution lessen service calls; partner service quality visibility avoids third-party application downtime

Simplify service level management

- Maximizes uptime and responsiveness — consistent service quality and availability increase service-feature usage and minimize churn
- Validates service quality — easy to interpret user interface and reports confirm QoS

Reduce operations and ownership costs

- Cuts economic risk and time-to-ROI via fast, easy deployment
- Resolves issues before they impact users, SLA contracts or customer satisfaction
- Improves capacity planning — make fact-based acquisition and deployment decisions

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Bell Labs Innovations

VitalApps™ Software Operations and Specifications

Performance Monitoring

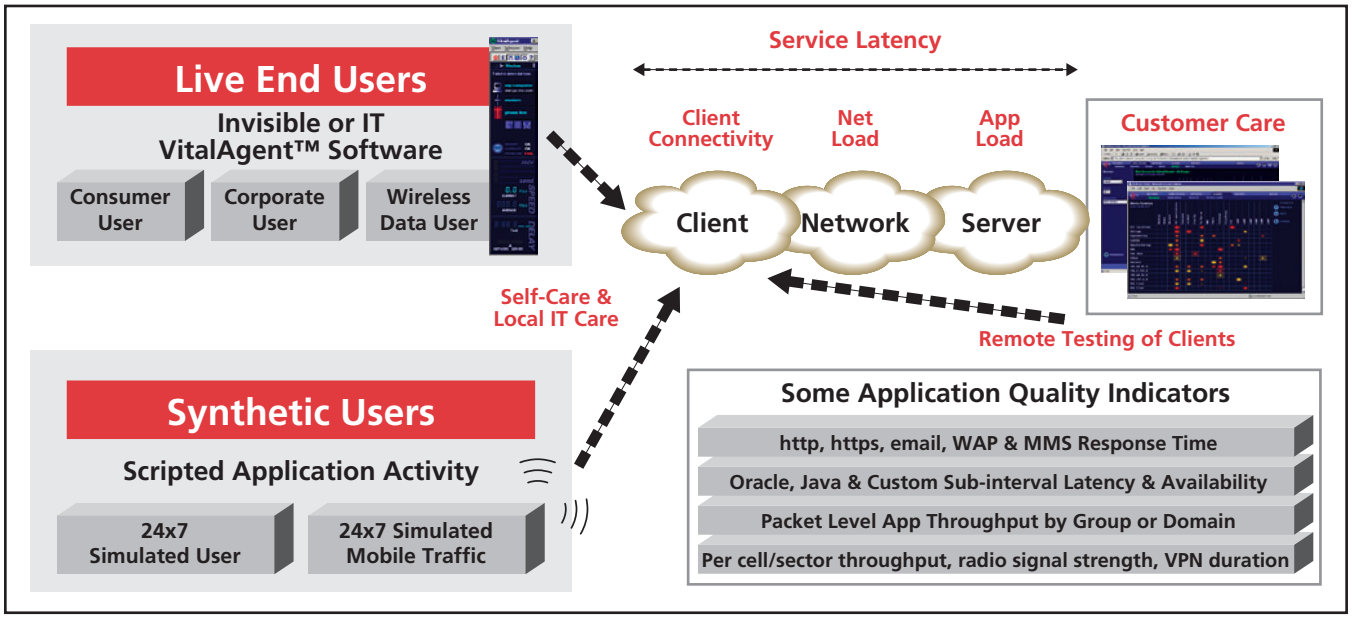
- Measures end-user experience of critical applications across the IP infrastructure
- Powerful aggregation algorithms developed by Bell Labs merge thousands of transactions into meaningful reports on overall system health and potential trouble spots
- Monitors system performance end-to-end — from the desktop, across local and remote links, through hubs, switches and routers, to the server and back again
- Provides Web-based customer-specific account assessment reports on-demand
- Four-tier transaction reporting provides high-level visibility into where a problem occurred, along with the specific tier and component that caused the poor performance
- Segments performance information by class of service, geography, service feature, or other grouping to quickly determine the extent of the problem
- Heat charts selectable by connection method – dial, LAN, DSL, Wireless LAN (Wi-Fi) or Mobile Wireless (e.g., 3G); provide an intuitive, at-a-glance indicator of application performance problems, with efficient drill-downs to additional performance details such as:
  - Number of transactions, transaction time, server time, server load time, network time, client time, transaction throughput, average transaction size, transaction errors, total traffic volume, application availability, number of connections, connection errors, response time, latency, retransmissions
- Provides visibility into remote access performance and availability, including busy signals, modem disconnects, and modem connect speeds
- Statistical analysis of performance data reveals unusual or exceptional events that might otherwise escape detection
- Collects, aggregates and reports historical network and application performance data for measuring corporate service level agreements (SLAs)
- Monitored events and parameters include remote access, application performance and availability, client performance and availability, network performance and availability, server performance, PC and network configuration data
- VPN tunnel monitoring, alerting and reporting – monitors the performance associated with setting up a VPN tunnel; lets you view comprehensive performance metrics in relation to the setup and usage of VPNs; provides alerts to help you quickly find, diagnose and fix VPN problems

Application Correlation

- Automatically detects and reports application performance problems in real time, providing instant, complete analysis of every application incident
- Correlates specific network device problems (via VitalNet™software) and application problems through a sophisticated application correlation feature that groups events related to a common source, enabling you to quickly treat the problem rather than the symptoms
- Application root-cause analysis pinpoints service-affecting bottlenecks, enabling fast recovery so services can be billed and customers remain content
- Provides technical specialists with a full summary of alarms and the users who are experiencing problems, plus customizable diagnosis and results prescription
- Simple displays reveal if the frequency of events-alarms is falling or rising, helping you understand network trends and forecast imminent problems
- Allows front-line help desk staff to detect, address and even resolve problems before they're reported, so phones stay on the hook — and users stay online
- Once a problem is resolved, the software automatically closes the event, providing an updated status report that eliminates the need to manually track problems

Scalability

- Distributed architecture makes it easy to implement policies by service, region, and partner
- Up to 2 million agents supported in one cluster
- Up to 10 years of historical data storage
- Simultaneously monitors hundreds of service features over wireline and wireless networks



Application data collected and analyzed by VitalApps™ software helps reduce call volume and resolve problems quickly

Server Configurations

VitalApps™ Software WIN NT/2000 Servers

Deployed Agents	Master Servers	Aggregation and Configuration Servers	Poster Servers	Report Servers
0–10,000	1	0	0	0
10,000–20,000	1	1 each	2	1
10,000–65,000	1	1 each	>20,000 agents*	1
10,000–20,000,000	1	>65,000 agents**	>20,000 agents*	

* 1 additional server for each additional 15,000 agents

** 1 additional server for each additional 75,000 agents

Reports

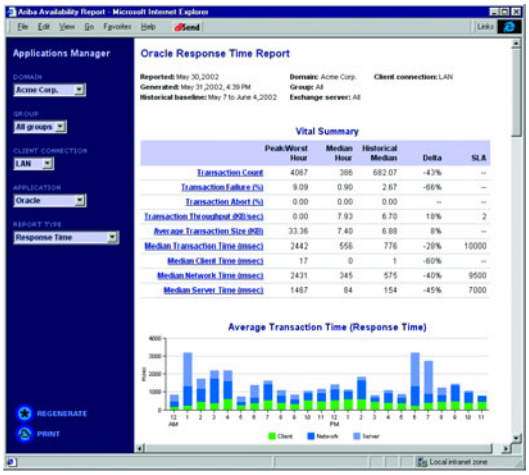
- Custom reports let you tailor performance reporting to needs of individual users
- Heat Chart reports drill-down provides detailed reports that identify the nature and source of specific problems. Reports may be generated for:
  - Overall network quality, response time, transaction comparisons, clients, application comparisons, application availability, latency, application throughput and more
- MyReports provides a flexible, customizable tool that allows focus on specific applications and users:
  - Best/Worst Performers reports enable you to identify exceptions and gain visibility into the performance experienced by end-users for all applications or a specific server running a critical application
  - Trend chart reports on single and multiple parameters, for busy hours or days, with critical and warning thresholds display up to 12 months of rolling performance history, enabling you to proactively ensure your IP infrastructure can deliver the performance required by an application
  - Group Comparison reports allow application performance for multiple functional or regional groups of users to be compared across one or more servers
  - Network Overview reports summarize network-wide application performance
- Flexible reports tracking events-alarms and their resolution over time, showing how fast events are coming in, how fast they're being cleared, etc.

Service Level Management

- SLA alarm reports empower network managers to better manage service and application providers
- Assess quality of services delivered to end-users against SLAs via service level alarms
- SLA reports readily identify the application, the server and the missed performance parameter
- Network quality displays show performance details about specific client-server paths, verify service level agreements and accurately assess capacity planning requirements; critical performance measurements include: total traffic volume, server retransmissions, client retransmissions, packet loss, network latency and throughput

Network Operations

- Extensive set of access control mechanisms enables you to provide customized views of application performance to a broad range of users
- Allows users to be proactive in requesting bandwidth and service requirement changes before performance is impacted
- Network heat charts with varying color and intensity identify application trouble spots, based on availability indexes
- Operations View summarizes key detailed statistics
- Detailed reports offer extensive visibility into the performance of individual applications and transactions within an application, providing daily, weekly or monthly data for up to six months
- Integration toolkits allow rapid incorporation of legacy and emerging technologies
- Detailed View (see below) presents monitored metrics for applications



Flexibility

- Provides open APIs
- Supports 1,000's of simultaneous users/active clients
- Interfaces with 3rd-party ticket generation systems (SNMP trap, Email, Remedy)
- Transact Toolkit, a key component of the service transaction management system, delivers the ability to identify, isolate and capture characteristics of unique and specific service transactions activity within an application
  - Packet-level demarcation via Transact Toolkit identifies patterns in the network packets to demarcate transactions within custom applications
- Automon automatically performs synthetic background analysis to simulate the action of end-users. Automon can regularly connect to servers inside provider networks, managed service accounts, or on partner networks to test availability, response and retrieval times, throughput, delays and congestion levels. It:
  - Continuously tests dial-up, broadband, VPN and wireless services
  - Automatically monitors the availability of key application servers
  - Automatically retrieves Web (http) and secure Web (https) pages
  - Automatically inputs form data on Web pages to monitor commerce transactions and value-added services
  - Provides integrated scripting capability to customize its powerful synthetic monitoring

VitalApps™ Software Operations and Specifications *(continued)*

Administration

- Role-based global and domain administrative interfaces provide user account administration, domain and group definition and creation of policies
- Administrative changes are tracked over a rolling 30-day period. Tasks tracked:
  - User account creation/update/deletion
  - Domain creation/edit/deletion
  - Reporting groups (server, phone number) creation/edit/deletion
  - User login/logout
  - Server addition/deletion
  - Aggregation server response failures
- Single-step domain policy profiles define a configuration that can be applied to multiple domains
- Robust default behavior and configurability provides out-of-the-box functionality
- Secure SSL (http) provides 128-bit encryption between client and master
- Protects group-specific data through fully integrated grouping and access control
- Allows sort, search and filter of data by specific business unit, location or technology
- VitalAgent™ software manageability and deployment – easy manageability reduces total cost of ownership; easy deployment through SMS package definitions and use of MSI & Active Directory

Monitored Applications & Servers Include:

- Internet (http, https and Intranet applications)
- Messaging (e-mail, SMS, MMS and RealPlayer)
- Database (Oracle®, MS-SQL, Sybase® and LDAP)
- Infrastructure (VPN, DNS and security)
- Business (SAP R/3, PeopleSoft and groupware)
- Custom in-house applications such as those using Java

VitalApps™ Software Client/Administrator Interface Requirements

- IE 5.5/6.0 or Netscape 6.2
- Video resolution 1024 x 768
- Acrobat Reader 4.0/5.0 with browser plug-in

VitalApps™ System Requirements

- Windows® NT/2000
  Pentium® III processor @ 600 MHz or equivalent, 512 MB RAM, 20 GB free disk space, CD-ROM Drive, Windows® 2000, SQL 2000 database

VitalAgent™ System Requirements

- Windows® 98, 2000, NT, XP operating systems, 32 MB RAM, 20 MB free disk space, Pentium® 200 MHz or higher – for mid-tier agents Solaris 8 or Windows® NT/2000

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VitalSuite® Network Performance Management Portfolio

Optimize network, service and application performance

Winner of many awards, including the Network World "World Class Award" for best performance management system, the Lucent VitalSuite® portfolio integrates multiple software modules to provide comprehensive, cost-effective service provider solutions. Giving you real-time views into everything from complex application transactions to mission-critical network resources, it lets you continuously monitor, measure and optimize performance at every level of your network.

VitalApps™ Application Performance Management software monitors your network-based applications, giving you a real-time view of each user transaction from the desktop, across the network or Internet, to the servers and back again.

VitalNet™ software merges network performance data with real-time event and application data from the other VitalSuite® modules to help you instantly understand how diverse processes and multi-vendor devices are interacting to support your network operations.

VitalEvent® software helps you optimize multi-vendor packet data and voice networks with powerful real-time capabilities that competitive products cannot match. Providing views of network connectivity that go beyond traditional performance management systems, it uses the VitalNet™ data collection capabilities to help you identify, analyze and visualize key events as they unfold.

Navis® iOperations Software Solutions

Navis® iOperations software is a comprehensive portfolio of multi-vendor, multi-technology Operations Support Systems for wireline, wireless, optical, circuit and data networks. *Navis*® iOperations systems are developed on extensible, programmable platforms, open APIs and advanced system architectures to provide carrier-class reliability and scalability, as well as rapid and affordable integration into your preferred operations infrastructure.

The award winning Lucent *Navis*® iOperations portfolio, including VitalSuite® and VitalQIP™ network management software, support the breadth of network management operations, including service provisioning, service assurance, and element management, mediation and modeling. *Navis*® iOperations solutions enable the delivery of advanced services across current and next-generation networks – while improving efficiencies, significantly reducing operating expenses and delivering the quality of service that customers demand.

Navis® iOperations software solutions are supported by Lucent Worldwide Services (LWS), systems integrators and service provider partners.

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