



NetValence CAPSTONE

IT & Office Automation
Infrastructure Monitoring,
Management & Decision Analytics

Derive the maximum from your IT infrastructure, by understanding how it impacts and relates to your business at all times. Achieve business value consistently and reliably to ensure IT infrastructure operations are always up and running.

What is the value of Enterprise Management Software that does not assist you take decisions? Especially if proactive healing or corrective actions cannot be taken automatically and in time?

CAPSTONE is an IT and Office Automation Infrastructure availability, state and performance monitoring & management tool that facilitates real-time and proactive monitoring and management along with automated actions.

CAPSTONE addresses the biggest infrastructure management challenge - real-time monitoring of Availability and performance metrics and relevant historical analytics. It addresses cost reductions and cost avoidance through:

- Better Utilization
- Increased Availability
- Better Performance
- Better Decisions

CAPSTONE enhances your investments in IT and Office Infrastructure with real-time and historical analytics & dashboards for improved capacity planning, troubleshooting and decision making. CAPSTONE combines analytics and out-of-the box reporting with monitoring, management and action engine in a pack. It also presents simplified and appropriate usability eliminating manual data analysis and management review preparation, thereby improving administrator productivity.

CAPSTONE leads to increased productivity, lower operations cost and higher utilization of your IT infrastructure.

Key Functionality

Fault & Configuration Management – CAPSTONE performs fault management through thresholding of availability and performance data in real-time. It detects adverse events like outages and threshold breaches based on rules defined. It also provides quick and proactive fault management through notifications in real time

and triggering reactive, corrective, remedial scripts or executables through actions module. The alarms provide status information in real-time. CAPSTONE discovers the resource and interface details automatically avoiding manual configuration and ensuring data integrity.

Availability Management – CAPSTONE detects outages and hence tracks SLA defined for the infrastructure elements. It monitors availability of connected IP devices through ICMP/SNMP polling and provides real-time monitoring with provision to set polling intervals as low as 5 seconds. This helps in detecting and isolating time sensitive availability issues like link flapping and packet drops.

Performance Management – CAPSTONE's analysis on trends of key performance indicators for specific elements in the IT infrastructure provides valuable insight that aids in capacity planning, network consolidation, planning network upgrades etc.,

SLA Monitoring - SLA reporting is provided out-of-the-box based on availability information i.e. percentage uptime for an element and additionally response time as well. Multiple SLA rules can be defined and every element in the infrastructure can be mapped to one SLA rule. Analytics provide insight into the SLA compliance by line of business and one can drill down to specific elements that fail SLA norms during a specified period.

IT Automation & Management - CAPSTONE'S Action Engine enables proactive action based on threshold breach or events. These actions may be customized to ensure the event is managed and cascading avoided. The Action Engine is designed to increase engineer / technician productivity dramatically through exception and automation based management. Automated diagnostic actions in the form of custom scripts can be triggered based on events. The output of these actions can be attached to the notification for faster problem resolution. Another set of actions can also be triggered post-notification to take automated corrective actions.

Decision Analytics & Line of Business Integration - CAPSTONE provides out-of-the-box decision analytics in the form of real-time dashboards, historical trend reports and event details. Analysis and presentation are intuitive with support for data export to PDF and Excel spreadsheets. Out-of-the box reports and analytics provide visibility of availability, capacity utilization of devices, impact on specific business and likelihood of failures based on data trends. These reports and analytical dashboards provide on-demand visibility on demand, capacity utilization, justification for upgrades, audit and data for SLA metrics of service providers etc. Line of business correlation makes businesses more responsive, improves business value of investments by correlating polled data with line of business, hierarchy or geography, indicating impact of IT Infrastructure on business.

Distributed Heterogeneous Environment – The architecture is designed to support distributed heterogeneous networks. Networks that are geographically distributed and distributed in terms of core, distribution and access layers can be monitored. CAPSTONE has also been architected to support multiple collectors for distributed heterogeneous networks. It supports SNMP which is an industry standard protocol for IT Infrastructure monitoring. This enables monitoring and managing an heterogeneous environment. CAPSTONE also provides pre-defined templates to support a variety of devices across several vendors. Open configuration support on the template allows custom configuration of any specific SNMP supported vendor device.

Service Provider Deployment - Multi Tenancy support allows a single instance of manager with customer specific collectors to ease the administration and tool maintenance. The information security and permissions module ensure only the authentic users get to see content that is authorised for them. Multi-Instance support – this reduces the need for multiple hardware. Multiple CAPSTONE instances can be deployed on a single hardware.

Key Features

Scalability – CAPSTONE is built on a n-tier distributed model across 3 key components, the manager, the data processor and the collector providing a very high level of scalability. While the manager and the data processor are central sources, the collectors can be scaled horizontally as required. It provides significant scalability with flexible deployment options with a distributed architecture consisting of One Manager & 'N' Collectors, wherein each collector can handle 2000+ end points. All components of the solution i.e. manager, collector and the database may reside on the same hardware depending on the size of the setup. The solution comes with an embedded MySQL database. Support for other commercial databases is also possible.

Security - CAPSTONE supports standard security practices like password encryption, communication data encryptions, fine grained controls for authentication & authorization. It has also been audited by third-party specialists for a range of vulnerabilities and intrusions, even in the context of multi-tenancy model.

Intuitive Configuration Template - Intuitive element configuration and polling templates provide flexibility and extensibility in defining and monitoring components in the enterprise IT infrastructure. The configuration templates define the overall element structure with details on resources, interfaces and key performance parameters that can be polled for on the device..Similarly, polling templates provide the polling engines the specific settings and work-flow settings like the notification rules, threshold rules, actions to be triggered, etc. A template defined once can now be applied to any number of devices. This wizard based approach of defining templates makes a complex function very easy for any administrator and hence reduces the maintenance overheads as well.

Monitoring - CAPSTONE provides both availability and performance monitoring through an agent-less monitoring approach. It detects network outages and performance threshold breaches of any connected system in real-time. Performance monitoring is based on SNMP protocol. NetValence supports SNMP versions v1, v2c and v3. All standard SNMP MIBs (integers, counters, gauges) may be defined as a metric or defined as a complex expression by combining two or more SNMP MIBs. The data exchange is compressed and secure.

Sample Analytics:

Event Dashboard



SLA Analysis - Availability



Typical Usage Scenarios

The following are some of the typical usage scenarios of CAPSTONE in the real-world. This is not the limits for the product, but an indicator of the usability.

Failure Monitoring

- Failure alarms, utilization, and error rates for circuits between routers (leased line/frame relay, MPLS, ATM, ISDN...) in real-time based on alerts and thresholds.
- Failure (reachability) of a server along with disk, memory, process utilization.
- Failure cause tag analysis for critical and repeated issues that enables action on most recurring issues.
- Identifying problem elements (reliability issues) - summary reports highlight the lines of business most impacted due to element and network problems. Drill down reports highlight rogue elements contributing to these problems. Data on MTBF and number of outages per affected element helps IT administrators focus attention on elements and areas.

Performance Monitoring

- Switch trunk utilization and port utilization along with error rates.
- Server utilization analysis including CPU, memory and disk. Identifying existing and potential performance bottlenecks - historical trends display potential element and network issues.
- Trend graphs over extended periods highlight increasing bandwidth utilization on links/circuits or an upward trend in CPU/ memory utilization of a core router that will set off warnings of impending degradation in user experience

SLA Monitoring

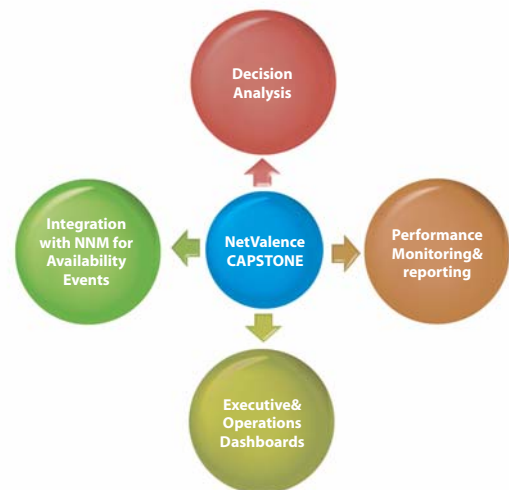
- SLA Analysis for elements, circuits and service providers – since SLA is related to availability and response time, non compliance due to poor response time (which could be overlooked) is also highlighted.
- Drill down reports help the administrator view the trend of other related element level parameters such as CPU & memory utilization and network (circuit) level parameters such as bandwidth utilization, to determine whether longer response times are element related or network related.

Action Engine

- Event based Trouble Tickets can be logged automatically in helpdesk tools through the Automated Action Engine.
- Triggering ping response time analysis when link utilization crosses set threshold. On receipt of availability down event automatically trigger the "Traceroute" command and analyse the command output to identify exact point of failure in the path.
- On receipt of warning or critical alert due to threshold breach of CPU utilization, run "ps" command on Unix systems to identify current running processes and the amount of CPU time used by each of the servers.

Decision Analytics

- Data trends provide growth patterns that can help determine engineering and resource needs for future.
- Provides on-demand reports without the need for compilation and analysis or the need for third-party reporting engines, thus saving on capex costs, effort and time.
- Reports are ready for submission to IT as well as business managers.
- Line of Business Integration through a flexible organization hierarchy that can be defined at three levels and this provides decision analytics based on category/business group/ geography etc.

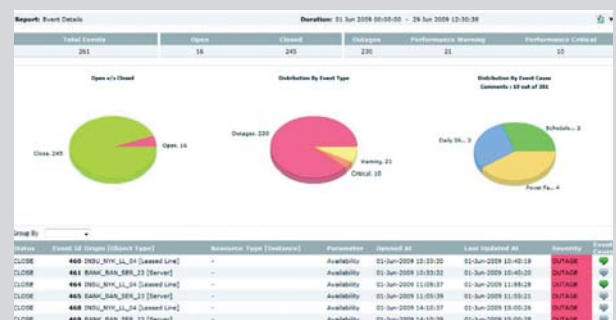


Sample Analytics:

Line of Business Analysis -IT Performance



Events Analysis



Why CAPSTONE?

Functionality - CAPSTONE provides availability & performance monitoring for IT and Office Automation elements (Network, Systems, Applications, Printers, Scanners, UPS...) through ICMP and SNMP polling. It can identify blind spots in your IT and Office Automation Infrastructure by integrating IT & OA monitoring data with line of business information (example business hierarchies) and IT interconnects and reveal to you potentially critical information that can help you make decisions and justify operational actions and investments.

Simplicity – CAPSTONE is state-of-art Framework for IT & OA Infrastructure monitoring & management. It has a very small foot-print, has an embedded database and ready-made templates for quick and easy deployment. The analytics are out-of-the box with options for end-user customization. The event management engine is open enough to accept a variety of actionable scripts based on specific events. CAPSTONE is quick to deploy, easy to manage and maintain. The rich analytics provide valuable insights into the health of the network infrastructure that aids in informed decision making.

Low Cost of Ownership – CAPSTONE lowers cost of ownership significantly with small foot-print, embedded database and support for any third-party database. Cause and effect relationships can also be identified through the event cause tagging and analysis.

Relevance

CAPSTONE provides relevance to all sections of decision makers:

- Executive Team - "What is the business value of our technology & infrastructure investments?"
- Finance - "Can we control and reduce the Total Cost of Ownership?"
- IT & OA Management - "How can we justify investments, and demonstrate perceivable benefits?"
- IT Operations - "How much of my infrastructure is affected and if so why? What are the actions that have been triggered and what is the failure or performance analysis?"

Try NetValence CAPSTONE risk-free and experience the right network analytics for better decisions.

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