NetDiagnostics

Next Generation APM Suite for Lab and Production

Cavisson NetDiagnostics Enterprise (NDE) is a comprehensive Application Performance Management (APM) solution for real-time monitoring, diagnostics and management of distributed processing in your application environment using state of art technologies with minimal overhead. Leading Fortune 500 brands rely on NDE to avert risks, reduce revenue loss, and improve customer loyalty by enabling proactive monitoring and real-time diagnosis of application performance issues.

For Lab and Production

NetDiagnostics Enterprise (NDE) is the key to achieving exceptional user experience and business efficacy of enterprise applications. NDE is a real fit for diagnostics in both the testing as well as the production environment. With NDE enterprises can quickly:

- ❖ Detect and isolate issues early in the application lifecycle
- ❖ Alert and diagnose issues quickly anywhere across the enterprise

NDE capabilities can be extended by seamlessly integrating with other Cavisson products for web performance testing, cloud testing, service simulation, end-user real and synthetic monitoring.

Why NetDiagnostics Enterprise?

NDE provides simple and intuitive view of live application traffic and all contextual analysis germane to the monitoring and diagnostics. Following makes NDE, the most advanced APM offering:

- ❖ End-to-end business transaction-centric monitoring and diagnostics
- ❖ Comprehensive system level as well as service level monitoring
- ❖ Deep diagnostics up to code / method level root cause analysis
- ❖ Powerful dashboard features with an exclusive executive dashboard for business KPI monitoring
- ❖ Big-data analytics, analyze millions of metrics, focus on those which matter the most
- ❖ Load index-based alerts besides dynamic baseline alerting mechanism

Monitoring Features

Monitor and Manage Business Transaction Health

Analyze the performance status of business transactions - slow, very slow, or failed (due to errors). This can be viewed right at the tier, server, or instance view level. NDE helps to pinpoint to the specific component/s causing performance issues. NDE also provides insight into business transaction health trend allowing engineering teams to proactively correct issues.

Integration Point Monitoring

Monitor and analyze availability and performance of the integration points, its thread pool usage and tuning. Get early warning before the threads used by an integration point get busy.

Fix issues before they affect users / revenue

Virtual Machine Monitor

Quickly check the health of your VMware host by monitoring CPU, memory utilization, number of virtual machines configured and running, and much more.

Network Layer Errors/ Retransmission

Analyze server for the Ethernet throughput, TCP/IP connections, network errors, max connections to a single IP. This leads to finding the right solution to issues, e.g. need to add more IPs.

Diagnostics Features

CPU Usage Analysis

Analyze CPU and the cause of its high usage. Determine whether the CPU time is in user space or kernel space. NDE provides insight into the root cause of high CPU, whether it is because of Java instance or because of some other parameters like garbage collection, batch jobs, Disk I/O, and high memory consumption etc.

Load Balancing

Evaluate load balancing across multiple data centers and between servers. Erratic load balancing can cause a server to go down because of unprecedented high load.

Heap Dump Analysis

Determine memory leak or any other heap issues and help re-evaluate the code and design of the application, which leads to memory leak and does not allow garbage collection to clear up the unused objects from the heap.

Diagnose at code-level with minimal overhead

Hotspots

Identify the outlier metrics and pin point the root cause of the slow response. Hotspot highlights where ever there is too much waiting in the response or a blocked-response. NDE Hotspots feature points to specific thread or method causing the slow response time.

DB Analysis

Analyze DB queries, number of active connections, leak connections, CPU, and the locks. This will lead to a conclusion whether DB is a cause of slow response. This upon fix can be compared for optimization.

Load Average Analysis

Determine whether the application design should be re-evaluated or that the disk needs to be partitioned appropriately for usage by other systems and users.

Java Garbage Collection (GC) Tuning

Analyze GC metrics to determine if it is the cause of performance degradation. This helps to fine tune to the right GC setting for optimum performance.

Flight Recorder

Capture detailed low-level run-time information on how JVM and java applications are behaving.

Methods Analysis

Analyze methods to determine issues at the code level. Methods can be analyzed for

o   Method level invocation rate and execution time, and CPU utilization

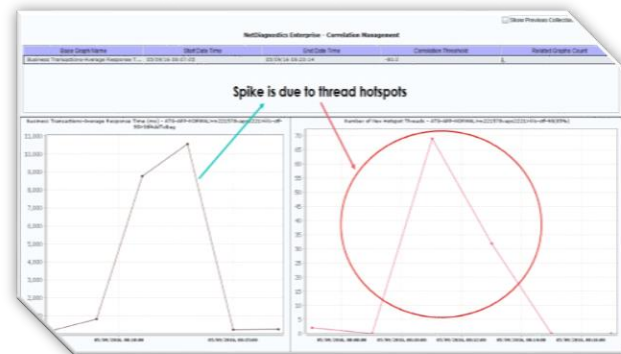o   Comparison with baseline before and after the fix

Pattern Matching

The root cause can be determined by pattern matching spike with other metrics showing the tendency to vary together. For example, the high response time could be because of a thread hotspot.

Thread Dump Analysis

Analyze and verify the state of threads, whether they are running or stuck (wait or deadlock). For example, if a thread is stuck on a particular method then it affects the server response time. Thread dumps can be:

- o Alert based,
- o On-demand, and
- o Schedule based

Reporting and Dashboard

Powerful Reporting Engine

NDE provides easy to use comprehensive set of template-based reports capturing numerous metrics, allowing users to export them in different formats. Visual illustration of monitoring and reporting data in a highly customizable user-friendly dashboard.

Trend Analysis Comparison Reports

A reporting feature to compare and analyze improvements and optimizations between releases before and after the fix is applied.

Executive Dashboard

Provides real-time insights into performance of critical business KPIs, including sales orders, revenue, etc.

Thread Pool Analysis

Analyze the threads as per configuration along with their status – hogging or in blocked state. Thread pool gives information about idle thread count, total thread count that the application can handle, pending user requests.

Cache Diagnostics

Analyze whether the network cache is offloading properly or not. NDE helps determining whether the network cache is able to manage appropriate traffic and divert the rest to the origin server.

Adaptive Alerts

Automate a corrective action including collection of relevant data, which would help in diagnostics, such as thread dumps. NDE supports following alerts:

- o Capacity alerts based on SLAs.
- o Behavior alerts based on baseline or the trends of the previous performance.

Cavisson Systems is a leading provider of user experience, and business efficacy management platform for mission critical applications. World's leading enterprises including retailers, network providers, financial institutions, rely on our product suite for performance, quality, and availability of their enterprise systems and applications. Cavisson platform mitigates risks and reduces probability of losing business opportunities by maximizing uptime, and optimizing response time for users to ensure seamless transactions and exceptional buying experience. Using Cavisson platform for performance testing and monitoring, enterprises can:

- ❖ Detect and isolate issues early in the application lifecycle, and
- ❖ Alert and diagnose issues quickly anywhere across the enterprise.

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