IBM

Tivoli® software

IBM Tivoli Composite Application Manager for Response Time Tracking

Highlights

- Provide response time tracking for Web and Microsoft Windows environments using a variety of robotic and real-time techniques

- Track transactions from end to end across multiple systems to quickly isolate and resolve the cause of bottlenecks or other issues

- Proactively avoid problems by providing alerts on response times before service level agreements are violated

- Track Web services transactions to help isolate problems in service oriented architecture (SOA) applications

- Seamlessly integrate with IBM Rational tools for easy-to-use life-cycle support

- Save administrator time with an easy-to-use portal that unites key performance and availability metrics and presents contextual, resource-based views and diagnostic tools

- Leverage smooth integration with other Tivoli products to provide a comprehensive application management solution for complex environments

Establish an application management solution for high availability and performance

Today's dynamic businesses often depend on a number of complex applications. These composite applications use business logic and data that span Web servers, Java™ 2 Enterprise Edition (J2EE™) application servers, integration middleware and mainframe systems including IBM CICS® and IBM IMS™. Traditional tools that monitor individual resources typically cannot solve application performance and availability problems. As a result, operations and development teams waste countless hours trying to identify, isolate and fix these problems. Poorly performing composite applications can have serious financial consequences on top- and bottom-line results of the business.

Improve end-user experiences by avoiding transaction problems

IBM Tivoli® Composite Application Manager (ITCAM) for Response Time

Tracking delivers unparalleled, inte-grated management tools for your Web and enterprise infrastructure that help maintain availability and performance of your on demand business. Part of the IBM Tivoli family of application manage-ment solutions, ITCAM for Response Time Tracking helps you avoid critical performance problems by proactively recognizing and isolating problems early, before they impact customers and other end users. So you can keep your business running smoothly — to meet customer demands around the clock and around the world.

Visualize and quickly identify the source of transaction problems

ITCAM for Response Time Tracking uses robotic and real-time techniques to track response times across Web-based and Microsoft® Windows® computing environments. By monitoring individual transactions as they occur and by generating synthetic transactions that

Middleware is Everywhere | **Can you see it?**

simulate actual business processes, the software lets your IT staff adopt an end user's perspective for measuring performance.

Through a comprehensive display that lets you follow the path of a user transaction end to end across your business infrastructure, ITCAM for Response Time Tracking makes it easy for you to evaluate a transaction in its entirety. You can drill down each step that the transaction takes as it travels across multiple enterprise systems. And you can measure how each component of a transaction contributes to the overall response time — regardless of customers' geographic locations and without requiring customers to install software on their workstations or modify application code. The entire transaction analysis process is transparent to customers and application developers.

Use auto-discovery and baselining techniques to improve time to value

In a fast-paced, on demand business setting, it's critical to implement an application management system that can determine where transactions are executing and how they're performing in a live environment. To help reduce the complexity of discovering transaction flows, ITCAM for Response
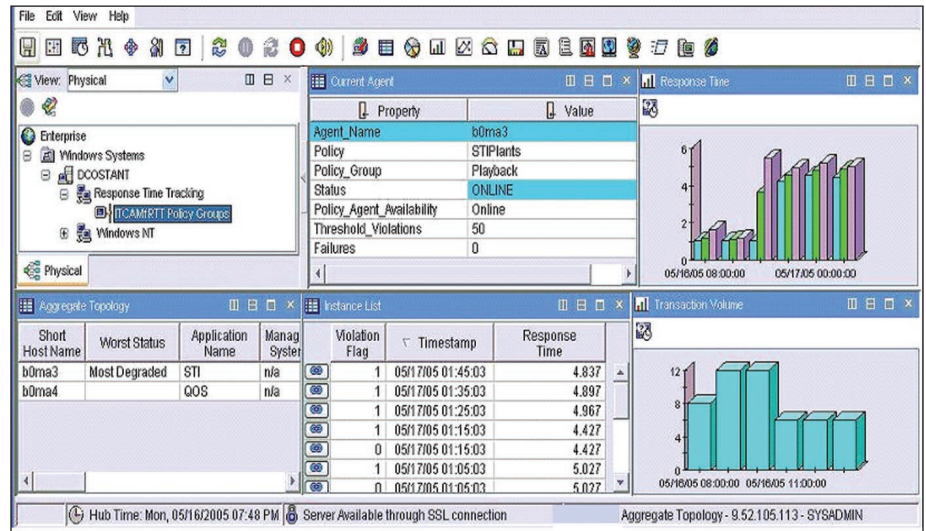
ITCAM for Response Time Tracking delivers a comprehensive, portal-based view of response time metrics.

Time Tracking performs the discovery process dynamically rather than relying on static definitions. The starting point can be a particular URL, a J2EE component, a synthetic transaction or a Web services request. You can also choose to let ITCAM for Response Time Tracking automatically set baselines for transaction response times as the system learns transaction flows and analyzes the response time characteristics of your unique environment.

Speed problem analysis through a portal-based interface

Using a portal-based interface to observe multiple response time metrics and resource-based views, you can speed analysis of performance issues.

Through the enhanced IBM Tivoli Enterprise Console® events generated by ITCAM for Response Time Tracking, operators are provided detailed diagnostic information that enables them to immediately isolate a problem and direct it to the correct specialist. Specialists can easily jump from an overall transaction view to a more detailed look at J2EE information using the *launch-in-context* capability of ITCAM for Response Time Tracking software and ITCAM for WebSphere® software. The context is preserved as specialists switch between different views of the data — helping minimize the time spent repairing complex application problems.

Response time tracking coverage

Transaction type	Function
Web application servers	Track transactions through IBM WebSphere and BEA WebLogic application servers.
CICS and IMS	Follow CICS and IMS flows through an IBM @server™ zSeries® environment, so that you can identify the precise CICS region causing a problem for CICS transactions that execute across multiple regions.
Web services	Track Web services as they flow through a WebSphere environment. Can be used with IBM Tivoli Composite Application Manager (ITCAM) for SOA to provide views from the services level to the transaction level.
IBM DB2® and SAP	Leverage Java Connection Architecture (JCA) support to view overall response times and back-end server information for SAP calls made using JCA. With the native DB2 Application Response Measurement (ARM) instrumentation, you can also follow calls made from WebSphere into the DB2 server to achieve an expanded view of database response times.
Siebel	Simplify performance tuning by leveraging a detailed view of transaction performance inside the Siebel server that lets you trace transaction paths through the server. Accomplish this using Tivoli software in conjunction with the industry-standard ARM instrumentation provided by Siebel.
Web servers	Track transactions through leading Web servers using plug-in support for Apache, IBM HTTP Server, Microsoft Internet Information Server, IBM Lotus® Domino®, iPlanet and SunOne servers.

Evaluate real end-user experiences

The Client Application Tracker component monitors response times of real end users at the client to help isolate the root cause of a problem, breaking down information into overall response time, server time and network time. By closely monitoring the client, you can achieve highly accurate measurements of response times. The quality-of-service monitor lets you capture performance data from customer transactions without using invasive server plug-ins or client agent software. When your preset threshold is exceeded, the monitor generates an alert in the form of a page, an e-mail, a Simple Network Management Protocol (SNMP) trap or an event that's sent to Tivoli Enterprise Console. You can also monitor individual URLs to verify whether key links perform well.

Simulate end-user behavior and monitor online transactions

To reproduce end-user behavior and monitor a transaction's health, you can use IBM Rational® Robot graphical user interface (GUI) transaction simulation. By running a PC designated as a synthetic user, you can measure response time for virtually any transaction, from a Java applet to the SAP GUI. Any transaction that uses a Windows GUI interface can be simulated, so your administrators can record and play back a transaction to measure response times under controlled circumstances.

The Rational Robot virtual user scripting capability in ITCAM for Response Time Tracking lets you quickly check availability of a large number of servers. Perform a protocol-level check that links directly to the topology view to isolate problems rapidly. And leverage this availability information to provide an early warning about server outages before calls start coming in to your help desk.

Rational Robot scripts are auto-instrumented to help avoid error-prone manual processes. With a single click, the integrated Rational Robot tool automatically gathers the necessary files and uploads them to the management server. In turn, support staff can spend more time expanding the number of transactions measured and less time performing administrative tasks.

The synthetic transaction investigator allows you to record actual transactions on your Web site, such as logging on, adding a product to a shopping cart, checking out and making a payment. You can also deploy recorded transactions as Extensible Markup Language (XML) scripts and schedule them for playback on one of the installed management agents. By deploying end points in multiple locations, you can use the synthetic transaction investigator to isolate fault domains.

Leverage an expanded topology view to understand transaction flows
ITCAM for Response Time Tracking continually expands the topology view so that you can obtain a complete view of transaction flows. Use the software to drill down through multiple types of transactions, speeding problem isolation and quickly resolving performance problems.

Extend the value of your solution with interoperability and integration
ITCAM for Response Time Tracking utilizes performance instrumentation that is delivered with IBM middleware for infrastructure and application environments, including WebSphere software, DB2 software and a variety of non-IBM products.

An integrated life-cycle approach is provided through ties to Rational software. Developers using IBM Rational Application Developer software can access production monitoring data from ITCAM for Response Time Tracking to isolate code problems. Using a simple point-and-click interface, developers can quickly isolate code problems by bringing production monitoring data into familiar Eclipse-based tools. In addition, simulation scripts developed in testing that use Rational tools can also be used by ITCAM for Response Time Tracking for production monitoring. This reuse saves the time and expense of developing new scripts and provides a consistent set of tools across the life cycle.

ITCAM for Response Time Tracking also links with IBM Tivoli Business Systems Manager to show response time problems in a business context.

Integration with the IBM Tivoli Service Level Advisor delivers the capability to generate service level reports based on performance and availability information. Rich Tivoli Enterprise Console events can also be used to identify systems that are causing response time problems, and this information can be used by IBM Tivoli Provisioning Manager to assign additional resources. The system uses Tivoli Data Warehouse for in-depth analysis and reporting, and integrates with Tivoli Enterprise Console for event tracking.

Leverage Tivoli to keep business-critical applications running
The Tivoli composite application management solution can optimize performance for J2EE, portal, SOA and mainframe applications. It brings application problem diagnosis and performance optimization capabilities like capacity planning, configuration management and performance tuning to a complex, heterogeneous computing environment. Its integration with Rational tools helps businesses successfully monitor, diagnose and resolve problems through the IT life cycle by enabling operations, support and development to manage application performance together as one team.

4

Tivoli composite application management is also an integral part of IBM IT Service Management solutions that are designed to help deliver consistent, repeatable and measurable IT services based on a best-practices framework.

For more information

To learn more about ITCAM for Response Time Tracking and other integrated solutions from IBM, contact your IBM sales representative or IBM Business Partner, or visit **ibm.com/**tivoli

About Tivoli software from IBM

Tivoli software from IBM helps organizations efficiently and effectively manage information technology (IT) resources, tasks and processes in order to meet ever-shifting business requirements and deliver flexible and responsive IT service management, while reducing costs. The Tivoli portfolio spans software for security, compliance, storage, performance, availability, configuration, operations and IT lifecycle management, and is backed by world-class IBM services, support and research.

ITCAM for Response Time Tracking at a glance

Hardware and software requirements

For management server:
- Windows 2000 Server with SP 4
- Windows 2000 Advanced with SP 4
- Windows 2003 Server Standard Edition (SE) or Enterprise Edition (EE)
- IBM AIX®, Version 5.2 or 5.3
- Sun Solaris, Version 9 or 10
- HP-UX, Version 11i 1
- xLinux, zLinux, iLinux or pLinux:
  – Red Hat Enterprise Linux® (RHEL), Version 3.0 or 4.0
  – SuSE Linux Enterprise Server (SLES), Version 8 or 9

For management agent:
- Windows 2000 Professional with SP 4
- Windows 2000 Server with SP 4
- Windows 2000 Advanced with SP 4
- Windows XP Professional with SP 1
- Windows 2000 Server EE/SE
- AIX, Version 5.2 or 5.3
- Solaris, Version 9 or 10
- HP-UX, Version 11i
- xLinux
  – RHEL, Version 3.0 or 4.0
  – SLES, Version 8 or 9
  – Red Flag Advanced Server (RFAS), Version 4.0 or 4.1
- zLinux, iLinux or pLinux:
  – RHEL, Version 3.0 or 4.0
  – SLES, Version 8 or 9
- IBM z/OS®, Version 1.4, 1.5 or 1.6
- IBM OS/400®, Version 5.2 or 5.3

For configuration and to view collected data:
- Microsoft Internet Explorer, Version 6 with SP 1 on Microsoft Windows

J2EE environments managed:
- IBM WebSphere Application Server, Version 5.0.2 or later
- BEA WebLogic Server, Version 7 and 8.1

To collect ARM-based performance data from DB2:
- DB2, Version 8.2 (Must use DB2 Universal Java Database Connectivity [JDBC] driver with connection pooling and WebSphere Application Server, Version 5.1.1 or later, which is not supported on zSeries or OS/400.)

To collect ARM-based performance data from Web servers:
(Requires the plug-ins provided in WebSphere, Version 5.1.1 or later. For release levels, refer to Software Announcement 203-319 dated November 25, 2003, for WebSphere Application Server, Version 5.1.)
- Supported servers include:
  – Apache Server
  – IBM HTTP Server
  – Internet Information Server
  – Lotus Domino Enterprise Server
  – Sun Java System Web Server
  – Covalent Enterprise Ready Server

To collect ARM-based performance data from CICS:
- CICS, Version 2.2, 2.3 or 3.1

To collect ARM-based performance data from IMS:
- IMS, Version 7.1, 8.1 or 9.1

For transaction simulation:
- Synthetic Transaction Investigator (STI): Windows 2000 Professional with SP 4, Windows 2000 Server with SP 4, Windows 2000 Advanced with SP 4, Windows XP Professional with SP 1, Windows Server 2003 SE/EE
- Rational Robot: Windows 2000 Professional with SP 4, Windows 2000 Server with SP 4, Windows 2000 Advanced with SP 4, Windows XP Professional with SP 1