Tivoli software

IBM Tivoli Composite Application Manager for SOA

Highlights

- ***Speed and simplify identification and resolution of SOA problems through a services topology view***
- ***Support heterogeneous SOA platforms, including the IBM® WebSphere® family, Microsoft® .NET and BEA WebLogic***
- ***Automate SOA management and help meet established service levels through built-in alerts, message mediations, situations and workflows***
- ***Promote management throughout the SOA development life cycle***
- ***Leverage smooth integration with other IBM Tivoli and WebSphere products to provide a comprehensive application management solution for complex environments***

Integrate application and SOA infrastructure management for high availability and performance

With the increasing implementation of service oriented architectures (SOAs), organizations have moved from traditional environments—in which an application was housed on a single server—to relying on composite applications. These applications use business logic and data that span diverse environments, including Web servers, Java™ EE application servers, integration middleware and mainframe systems, including IBM CICS® and IBM Information Management System (IMS™).

Businesses frequently turn to SOAs to build, deploy and integrate services independent of applications and the computing platforms on which they run. Yet traditional tools that monitor individual resources typically cannot solve composite application performance and availability problems.

Because many Web services are used to make mainframe applications and middleware available at the front end, it is not adequate to monitor and manage only at the Web services level. Instead, Web services need to be incorporated into the end-to-end management domain, and services teams need the ability to see when business services are impacted and dynamically reroute services when—or before—problems occur. Otherwise, operations and development teams waste countless hours trying to identify, isolate and fix problems—all while poorly performing composite applications negatively affect the bottom line.

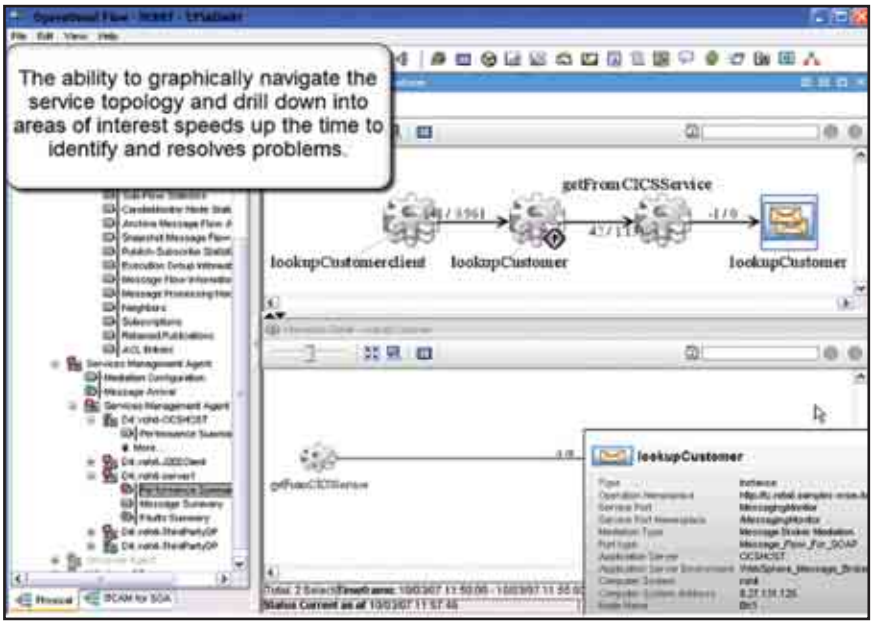
IBM Tivoli® Composite Application Manager (ITCAM) for SOA delivers unparalleled, integrated management tools for your Web and enterprise infrastructure that help maintain business availability and performance throughout the SOA life cycle. With ITCAM for SOA, you can discover, monitor, diagnose and control the service layer of

your IT architecture and easily support heterogeneous SOA platforms. ITCAM for SOA enables you to monitor service levels, so your IT team can examine performance problems in the same context as service users—helping to greatly enhance problem resolution.

When you use the software in conjunction with other products in the ITCAM family, you can drill down to the application, resource and messaging layers to identify the source of bottlenecks or failures and pinpoint services that take the most time or use the most resources. ITCAM for SOA helps you avoid critical performance problems by proactively recognizing and isolating problems early.

Leverage an integrated console with service, application and resource views

ITCAM for SOA includes IBM Tivoli Enterprise Portal, an easy-to-use, Web-based interface that will be instantly familiar to your services teams because it is shared among other ITCAM, IBM Tivoli Monitoring and IBM Tivoli OMEGAMON® products. Using the portal's content-rich views and dynamic workspace linking—which delivers a context-sensitive onscreen link to the target workspace of another product—you can quickly achieve an end-to-end



ITCAM for SOA enables you to graphically navigate the service topology and drill down to speed problem identification and resolution.

view of your SOA that tightly integrates data, events and views. You can collect this information from multiple systems and subsystems, including IBM WebSphere DataPower® SOA Appliances and IBM CICS Transaction Server.

Use services topology views to speed problem resolution

Using sophisticated services topology views available through Tivoli Enterprise Portal, ITCAM for SOA provides actual views into service flows to deliver a higher level of understanding of Web services by displaying service-to-service relationships. From these views, you can easily see service status and drill down to service metrics.

Benefit from cross-product workstation linking

However, many times the underlying infrastructure (either an operating system or a middleware problem) needs operator attention to correct a service performance problem. ITCAM for SOA also provides Tivoli Enterprise Portal–based cross-product workstation linking—with easy-to-use point-and-click interfaces—to other IBM Tivoli Composite Application Manager agents, IBM Tivoli OMEGAMON XE for Messaging and IBM Tivoli operating system agents. This cross-product workspace linking ties together views of the services topology and application

and resource monitors to help speed problem resolution. The service requester feature enables you to track where service requests originated, so particular requesters can be targeted for improved service.

Collect comprehensive Web service information

With Tivoli Enterprise Portal, you can check configuration, performance, message and fault summary views. For example, you can:

- *Specify thresholds, such as size of messages or number of messages received within a certain timeframe.*
- *Customize workspaces and provide detailed service views that are appropriate for various classes of users.*
- *Understand and track relationships of Web services to each other and to underlying IT components using topologies that visually correlate abstract processes with real system artifacts.*
- *Perform impact analysis to determine which services are affected by slowdowns or outages, to aid prioritization of support activities.*
- *Check availability, throughput and performance metrics for Web services.*
- *Monitor services in real time or use historical data to inspect the extensible markup language (XML) messages, observe relationships and determine usage patterns.*

Unite business and IT goals as you monitor and manage the complete service environment

With ITCAM for SOA, you can treat services as first-class objects that can be managed like any other resource. You can use it to monitor and report on service levels using the same terms as those who use the services, so you can improve communication between development and operations teams. ITCAM for SOA helps you:

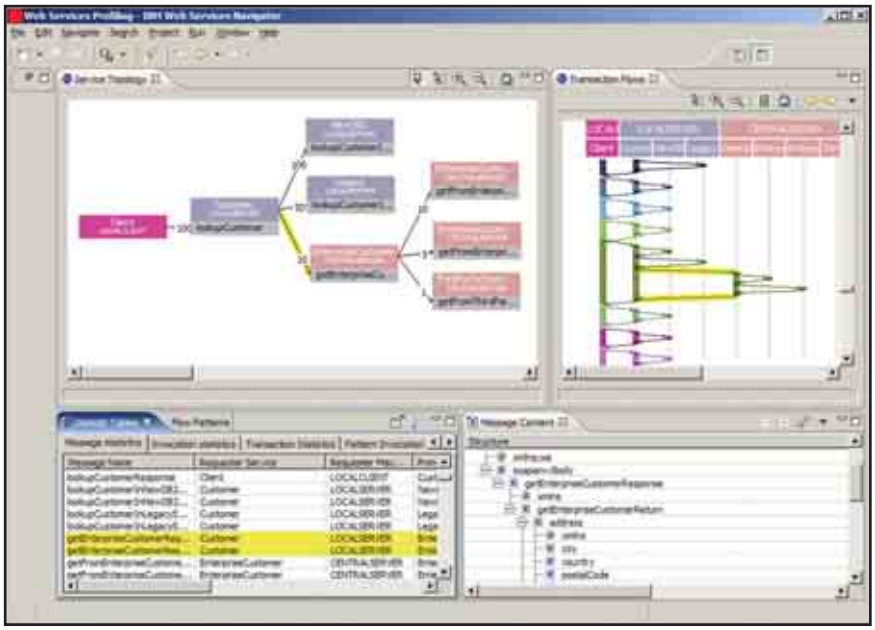
- *Confirm that key business applications are meeting agreed-upon service levels.*
- *Determine which services are affected by slowdowns or outages, and leverage this information to effectively prioritize support activities.*
- *Import Business Process Execution Language (BPEL), created with IBM WebSphere Business Modeler, into IBM Tivoli Change and Configuration Management Database (CCMDB) to highlight and help manage business process service dependencies.*
- *Generate discrepancy reports between services that are actually being used and those that are registered in IBM WebSphere Service Registry and Repository to identify when alternative services should be used or when services are underutilized.*
- *Obtain Business Intelligence Reporting Tool (BIRT) reports on SOA performance through the IBM Open Process Automation Library (OPAL).*

Built-in features help improve business flexibility and avoid service disruptions

Built-in alerts, message mediations, situations and workflows in ITCAM for SOA deliver advanced SOA management capabilities. For instance, you can establish a threshold for service levels and tie that threshold to an alert that will notify you when problems occur. You can also use these thresholds to implement service level agreements (SLAs) by generating events when you exceed service levels.

So if you detect a problem with a particular server, you can use ITCAM for SOA to establish a Tivoli Enterprise Portal–based workflow for remediation and dynamically reroute traffic to a different server to avoid service disruptions. You can choose to process events within Tivoli Enterprise Portal or send them to a wide range of event management systems, such as IBM Tivoli Enterprise Console®.

ITCAM for SOA helps you monitor and control service behavior noninvasively, with no application changes, to help reduce the time and cost of deploying manageable services and speed time to value of your management solution.



Tivoli Enterprise Portal services topologies correlate business processes with services and underlying artifacts to help ITCAM for SOA analyze the business impact of incidents and problems.

Get end-to-end SOA coverage—no proxy required

With ITCAM for SOA, you can cohesively manage your SOA through discovery, inventory, monitoring, data collection, automation and displays of Web services running across multiple environments in your enterprise service bus (ESB). Unlike competitive offerings, ITCAM for SOA delivers integrated support for IBM ESBs, so no proxy is required in front of your ESB—helping to reduce management overhead and eliminate a point of failure.

View services, transactions, resources and events through a single console

ITCAM for SOA includes a customizable set of workspaces that allows IT operations managers to view information on services, transactions, resources and events in a single console. The software includes an Eclipse-based viewer for deep-dive views into Web services relationships, flows, patterns and XML message introspection. You can use ITCAM for SOA to:

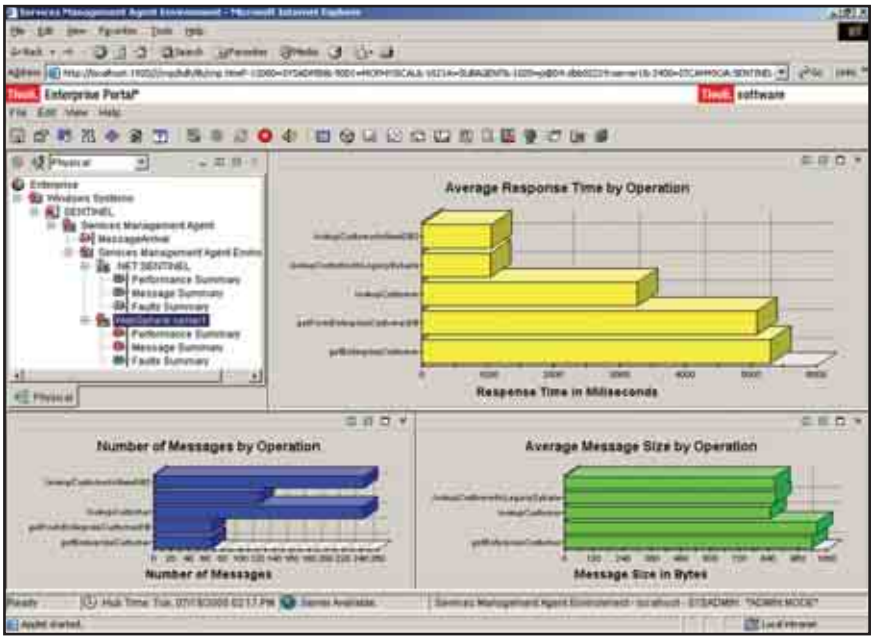
- *Reject messages based on certain conditions, reject those from a particular client or reject all messages to a service.*
- *Log requests for and responses to messages.*
- *Automatically control how messages are routed and transformed by using runtime information from ITCAM for SOA to reconfigure IBM WebSphere Process Server and IBM WebSphere Enterprise Service Bus.*
- *Sense deteriorating performance and determine what actions need to be taken by using the software in conjunction with products such as IBM Tivoli Intelligent Orchestrator or IBM Tivoli Provisioning Manager.*
- *Reject service requests in particular situations, such as when the system is overloaded by user requests.*
- *Detect Simple Object Access Protocol (SOAP) faults, excessive message sizes and other service anomalies, then generate events to invoke automated incident management processes.*
- *Provide service performance information to WebSphere Service Registry and Repository to enable applications to dynamically select service end points to help optimize application performance.*

Deliver meaningful information across the full SOA application life cycle

ITCAM for SOA enables large and small enterprises to manage throughout the SOA development life cycle, so development and other preproduction

users can obtain a deep understanding of service use, flows and relationships. Different stakeholders can see their own perspectives while sharing common information with others involved in different areas of the application life cycle. For example:

- ***Service architects, integration specialists and testers*** *can view service topologies, service patterns and service flows by importing data from IBM Tivoli Data Warehouse into the Eclipse-based Web Services Navigator.*
- ***Operators*** *can monitor and manage the overall SOA at various levels of detail, from the service layer to more detailed application and resource components.*
- ***Subject-matter experts*** *can drill down from service views into application and resource monitoring views.*
- ***Service level managers*** *can generate service level reports using IBM Tivoli Service Level Advisor.*



Web Services Navigator showing service topology, sequence flows and XML content.

Optimize business-critical application availability

The Tivoli composite application management software family can optimize performance for Java EE, portal, SOA and mainframe applications by delivering robust capabilities such as capacity planning, configuration management and performance tuning. The software family is an integral part of IBM 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 SOA and other integrated solutions from IBM, contact your IBM representative or IBM Business Partner, or visit **ibm.com**/tivoli

About IBM Tivoli service management software

Tivoli service management software offers a platform for organizations to achieve the visibility, control and automation they need to deliver quality service. Unlike IT-centric service management, Tivoli service management software delivers a common foundation for managing, integrating and aligning business and technology requirements. Tivoli service management software is designed to quickly address an organization's most pressing systems management needs and help proactively support changing business demands. The Tivoli portfolio is backed by world-class IBM Services, IBM Support and an active ecosystem of IBM Business Partners. Tivoli customers and business partners can also leverage each other's best practices by participating in independently run IBM Tivoli User Groups around the world—visit www.tivoli-ug.org

Tivoli Composite Application Manager for SOA at a glance

Monitored environment

ITCAM for SOA offers a cross-platform, single-console application management solution designed to monitor applications running on the following SOA application platforms:

- WebSphere Application Server 5.1 and 6.0.1, 6.0.2, 6.1—nonrestricted mode
- IBM WebSphere Business Integration Server Foundation 5.1
- WebSphere Process Server 6.0.1, 6.0.2.x
- WebSphere Enterprise Service Bus 6.0.1, 6.0.2.x
- CICS Transaction Server 3.1 or later
- IBM WebSphere Application Server Community Edition 1.0.1.1 (1.0.1.2 on IBM AIX®)
- WebSphere DataPower SOA Appliances—XA35, XS40 and X150 with firmware 3.6.1
- BEA WebLogic 8.1.4, 8.1.5, 9.1, 9.2
- Microsoft .NET Framework 1.1 (with the required service pack) and 2.0, 3.0
- SAP NetWeaver 6.40, Service Pack 9
- JBoss 4.0.3

ITCAM for SOA monitors SOA application platforms running in the following operating system environments:

- AIX
- IBM z/OS®
- Sun Solaris
- HP-UX
- Red Hat and SUSE Linux® Enterprise Server (SLES)
- Linux on IBM System z™—Red Hat and SLES
- Microsoft Windows®

Management environment

Management servers are supported on the following operating system environments:

- AIX
- z/OS
- Solaris
- Linux—Red Hat and SLES
- Linux on System z—Red Hat and SLES
- Windows

ITCAM for SOA supports all databases that are supported by Tivoli Enterprise Portal Server and Tivoli Data Warehouse.

Tivoli Enterprise Portal requires Microsoft Internet Explorer® 6.

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TAKE BACK CONTROL WITH Tivoli.

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