Monitor, manage and control your service-based infrastructure effectively to deliver high availability and performance

Tivoli® software

IBM Tivoli Composite Application Manager for SOA

Highlights

- Promote management throughout the service oriented architecture (SOA) development life cycle, enabling development and other preproduction users to obtain a deep understanding of service flows and relationships
- Provide an integrated, easy-to-use console that can include service, application and resource views
- Automate SOA management and help meet established service levels through built-in alerts, message mediations, situations and workflows
- Speed and simplify identification and resolution of SOA problems by drilling down to application components or IT resources
- Support heterogeneous SOA platforms, including the IBM WebSphere family, Microsoft .NET and BEA WebLogic
- Leverage smooth integration with other IBM 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.

Build an on demand environment to respond quickly in a fast-changing world

As companies move to on demand business models, many adopt an SOA approach to build their composite applications. An SOA is an application framework that takes business applications and breaks them down into individual business functions, called services. To implement a business process, the company then orchestrates these services.

With an SOA, you can build, deploy and integrate services independent of applications and the computing platforms on which they run — making your business processes more flexible. As a result, you can achieve rapid growth, a reduced total cost of ownership and improved access to timely, accurate information. By using SOAs to help optimize IT resources based on business goals, businesses face minimal impact from internal or external changes, like outsourcing, mergers or acquisitions. And because change is the only thing you can count on in today's business world, the agility to respond with speed to customer

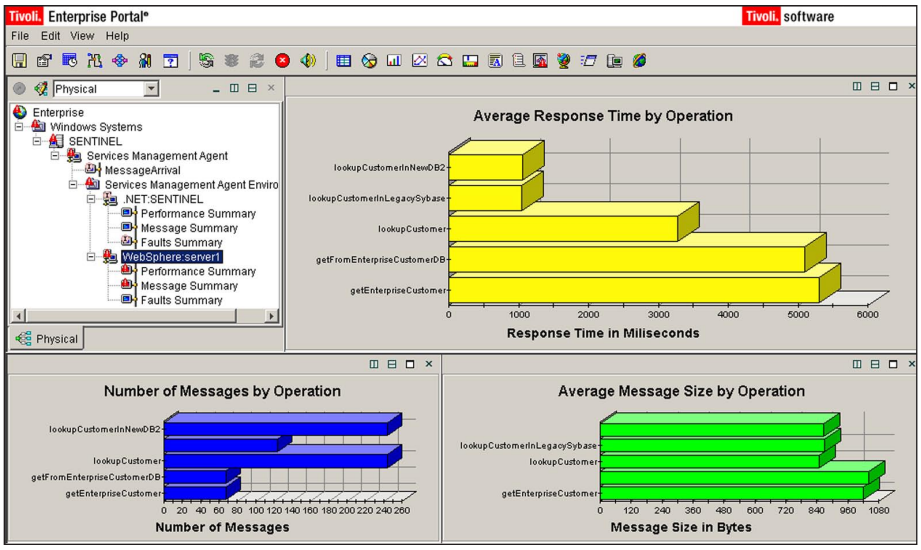
demands, market opportunities and external threats is more important than ever.

Understand the scope of managing an SOA

SOAs are frequently built using Web services, a platform-independent collection of protocols and standards that allows different applications or systems to exchange information. Because Web services are designed for reuse, they help improve development efficiencies, accelerate deployment and enable more effective management.

To truly provide effective management, Web services need to be incorporated into the end-to-end management domain over composite applications and resources that support an SOA environment. 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, businesses need to view Web services as part of their end-to-end infrastructures.

Many basic monitoring solutions are not integrated with the existing systems management infrastructure. Consequently, it's hard to determine how composite applications work in different environments — such as within IBM WebSphere® Application Server — or across different servers that are part of an enterprise service bus (ESB). Lacking an integrated console, businesses often have no way to perform root-cause analysis of the infrastructure that supports the SOA.



Tivoli Enterprise Portal — Service Summary View

Manage your SOA infrastructure more effectively

IBM Tivoli® Composite Application Manager (ITCAM) for SOA delivers unparalleled, integrated management tools for your Web and enterprise infrastructure that help maintain availability and performance of your on demand business. With ITCAM for SOA, you can monitor, manage and control the service layer of your IT architecture. When you use the software in conjunction with other members of 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.

Part of the Tivoli family of application management solutions, ITCAM for SOA helps you avoid critical performance problems by proactively recognizing and isolating problems early, before they impact customers and other end users. So you can help keep your business running smoothly — to meet customer demands around the clock and around the world.

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. The software includes tools that let you monitor and report on service levels using the same terms as those who use the services. You can resolve problems faster by improving communication between development and operations teams. ITCAM for SOA helps you:

- Confirm that key business applications are effectively governed and meet agreed-upon service levels.
- Determine which services are affected by slow-downs or outages, and leverage this information to effectively prioritize support activities.
- Monitor and control service behavior non-invasively — without application changes — to speed time to value.

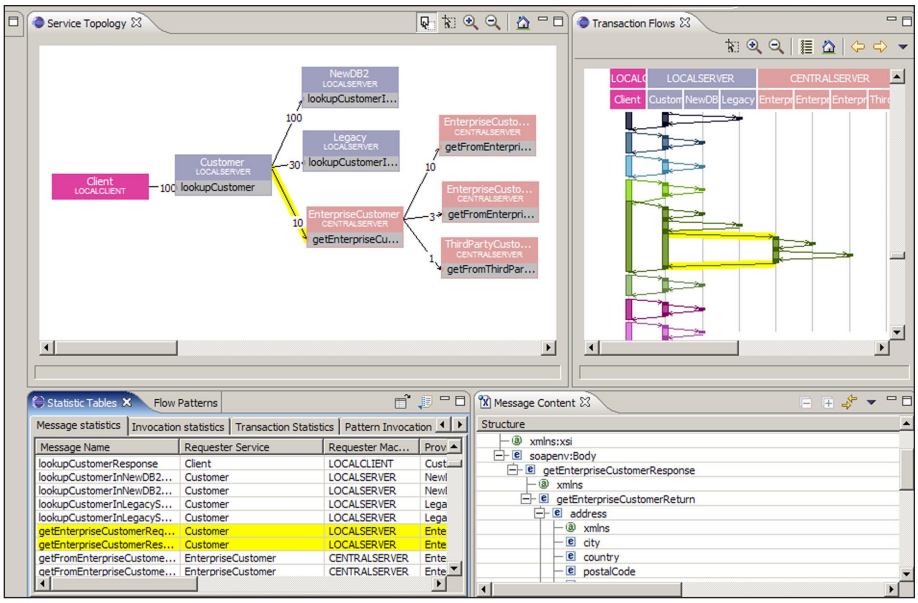
Oversee SOAs consistently across multiple technologies

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 ESB. Implement service level agreements (SLAs) by generating events when service levels are exceeded. Then use the events to drive automated mediation of the Web services flow. Using ITCAM for SOA, you can process events within IBM Tivoli Enterprise Portal, or send them to a wide range of event management systems, such as IBM Tivoli Enterprise Console.®

Tivoli Enterprise Portal — Message Summary View

The software includes a customizable set of workspaces that allows IT operations managers to view services, transactions, resources and events in a single console. It also includes an Eclipse-based viewer for deep-dive views into Web services relationships, flows, patterns and Extensible Markup Language (XML) message introspection.[1] 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.
- 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.



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

Leverage an integrated console with service, application and resource views

ITCAM for SOA includes Tivoli Enterprise Portal, an easy-to-use, Web-based interface that's shared among other ITCAM, IBM Tivoli Monitoring and IBM Tivoli OMEGAMON® products. Using the portal's content-rich views and cross-workspace linkages, you can quickly achieve an end-to-end view of your SOA that tightly integrates data, events and views from multiple systems and subsystems.

With the integrated console, you can drill down from the services layer of your SOA to application component and resource layers to speed diagnosis. You can also use the portal to check configuration, performance, message and fault summary views. For example, you can:

- Specify thresholds, such as for size of messages or number of messages received within a certain timeframe.
- Customize your workspaces and provide detailed service views that are appropriate for various classes of users.
- Understand and track the relationships of Web services to each other and to underlying IT components.
- Check availability, throughput and performance metrics for your Web services.
- Monitor services in real time or use historical data to inspect the XML messages, observe relationships and determine usage patterns.

Manage your SOA across the full application life cycle

ITCAM for SOA gives large and small enterprises a management solution across the entire Web services application life cycle for service architects, administrators, subject-matter experts, operators, consultants and others involved in the development, testing, deployment and ongoing management of service-based systems. 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 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.

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 IBM 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. 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 SOA 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 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, Version 5.1 and 6
- IBM WebSphere Server Foundation, Version 5.1.1
- IBM WebSphere Process Server, Version 6.0
- BEA WebLogic, Version 8.1
- Microsoft® .NET, Version 1.1

ITCAM for SOA monitors SOA application platforms running in the following operating system environments:[2]

- IBM AIX®
- IBM z/OS®
- Sun Solaris
- Linux® – Red Hat and SLES
- zLinux — Red Hat and SLES
- Microsoft Windows®

Management environment

Management servers are supported on the following operating system environments:[2]

- AIX
- z/OS
- Solaris
- Linux – Red Hat and SLES
- zLinux — Red Hat and SLES
- Windows

One of the following databases is required:

- IBM DB2 Universal Database™, Version 8.1 and 8.2 (a copy of DB2 Universal Database Workgroup Edition is included with ITCAM for SOA)
- Microsoft SQL Server 2000
- Oracle, Version 9.2 and 10.1

Tivoli Enterprise Portal requires Microsoft Internet Explorer, Version 6

IBM Corporation
Software Group
Route 100
Somers, NY 10589
U.S.A.

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[1]Eclipse is an award-winning, open source platform for the construction of powerful software development tools and rich desktop applications. Leveraging the Eclipse plug-in framework to integrate technology on the desktop saves technology providers time and money by enabling them to focus their efforts on delivering differentiation and value for their offerings. The Eclipse environment supports multiple languages, platforms and vendors, is built by an open source community of developers and is provided royalty-free by the Eclipse Foundation. Eclipse is written in the Java language, includes extensive plug-in construction toolkits and examples, and can be extended and deployed on a range of desktop operating systems including Windows, Linux, QNX and Macintosh OS X. Full details on Eclipse and the Eclipse Foundation are available at www.eclipse.org.

[2]See product announcement letter for release and availability details.

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