



Tivoli software

IBM Tivoli Application Dependency Discovery Manager

Highlights

- Obtain comprehensive visibility into business applications and their supporting cross-tier infrastructures
- Automatically create and maintain application maps that represent the various configuration items (CI), their deep configurations and run-time interrelationships
- Achieve rapid results by taking advantage of agent-free discovery technology
- Use open application programming interfaces (APIs) to efficiently share application maps with a wide variety of operational management solutions
- Leverage the foundational data store and a rich set of analytics to enable IT processes such as change and configuration management, and compliance management
- Take advantage of scalability to global levels and support for enterprise-class security

Business applications are no longer homogeneous and easy to manage. They are built from complex components on distributed architectures, making them difficult to fully understand. And over time, they only become increasingly complex as more components and functions are added.

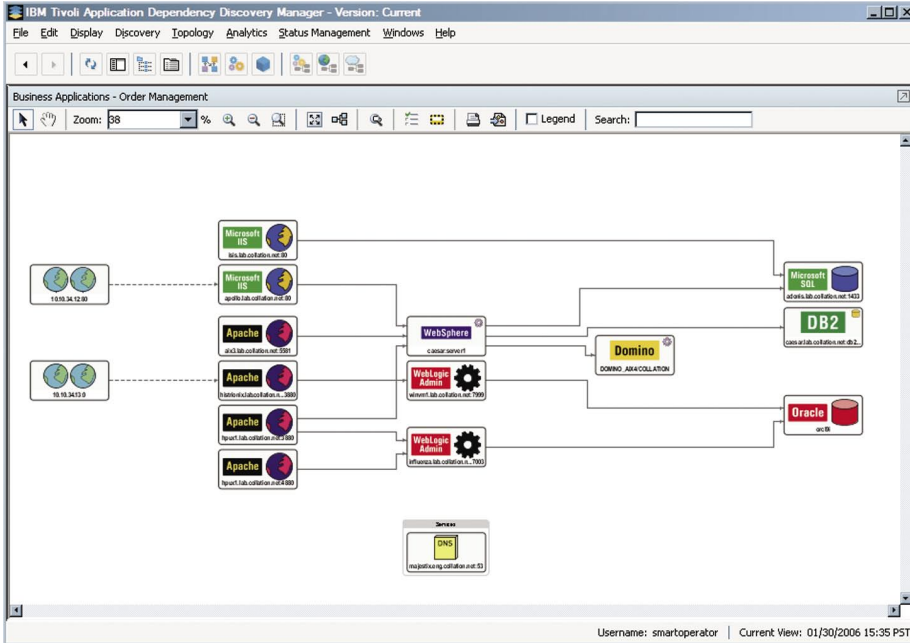
The result is that usually no one person can understand all components of an application and how they fit together. Consequently, IT organizations have difficulty changing these applications to meet the business requirements while optimizing application performance and availability. And when a problem occurs, the organization frequently cannot identify the cause of the problem—let alone resolve the problem—before its impact becomes severe.

Or, to take another example, how can an organization verify that its IT environment complies with its internal policies

and external regulations—such as Sarbanes-Oxley (SOX) and others—if it doesn't even know exactly what components make up the systems that need to be certified?

In these cases and many more, your organization can take advantage of the application infrastructure mapping capabilities of IBM Tivoli® Application Dependency Discovery Manager. The software automatically creates and maintains maps that describe run-time dependencies and include deep configuration values and accurate change histories.

You can use Tivoli Application Dependency Discovery Manager not only to obtain visibility into application complexity, but also to support a wide range of business applications and processes that can benefit from the information. For example, because the software can provide “discovery snapshots” about what components



Obtain visibility into the cross-tier structure of your business-critical applications.

of an application have changed, you can help minimize the amount of time involved in accurately diagnosing the root causes of problems. You can also use the software to audit the impact of changes to your business processes and make sure they have the results you expect—in conjunction with your efforts to align IT and business priorities, for example.

Automate and speed application discovery

Tivoli Application Dependency Discovery Manager uses more than 250

discovery sensors to enable “out of the box” discovery of most components found in the typical data center—across the application software, host, storage and network tiers. The discovery sensors are extensible and reside on the Tivoli Application Dependency Discovery Manager server, where they collect configuration attributes and dependencies—then organize them into application maps (see screen capture above). The software provides several application map views, including:

- Cross-tier business application maps.
- Software application infrastructure maps.
- Physical infrastructure (including layer 2) maps.

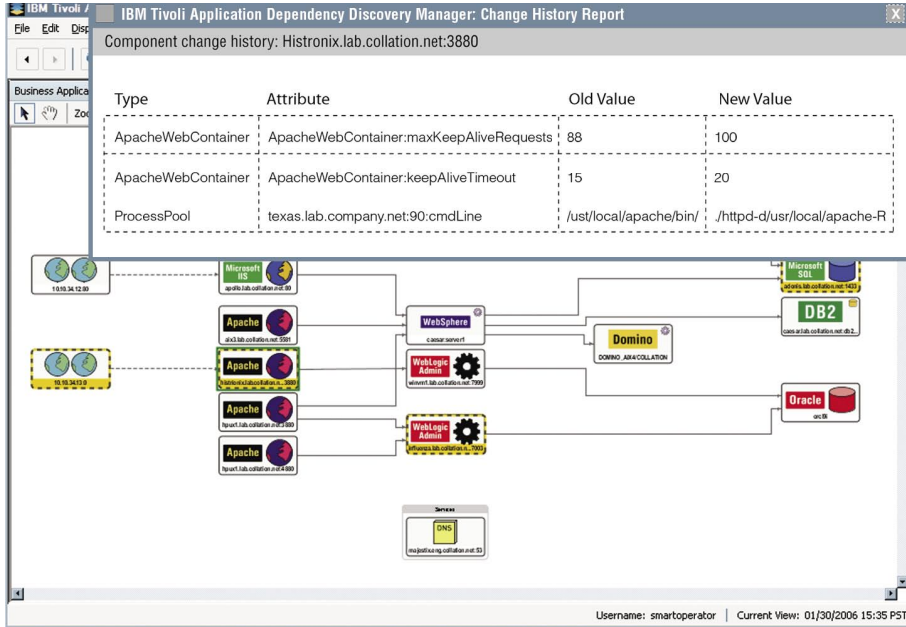
Tivoli Application Dependency Discovery Manager scales to thousands of servers and works seamlessly across multiple domains without adverse impact on load, bandwidth or security.

Obtain deep configuration details

Tivoli Application Dependency Discovery Manager provides visibility into the details you require to plan and manage applications, such as critical changes that impact service delivery. Examples of changes that the software tracks include:

- Deployments of software objects such as Enterprise JavaBeans™ (EJBs) and Microsoft .NET assemblies.
- Patches of applications and operating systems.
- Alterations of logical and physical network and storage settings.

In these cases and many more, Tivoli Application Dependency Discovery Manager allows you to view detailed change histories (see screen capture on next page)—information that you can use to rapidly isolate changes and help minimize problem isolation time. You can also use the software



View detailed change histories for all components within complex applications.

to automatically populate the IBM Tivoli Change and Configuration Management Database.

Integrate with other products and processes with ease

For easy integration, Tivoli Application Dependency Discovery Manager was built with an open architecture, robust and open APIs, and a complete, easy-to-use software development kit (SDK). Using the APIs and SDK, you can rapidly deploy and share application maps across management products, teams and processes. And you can

create closed-loop service management systems and processes that effectively align your IT infrastructure with your business services and objectives.

The Tivoli Application Dependency Discovery Manager API includes:

- *Data API*—provides complete, standards-based access to the software's application maps, enabling other management applications to access cross-tier application topologies, detailed attribute values and dependencies, and comprehensive change history data.

- *Control API*—enables other applications to set up and control the Tivoli Application Dependency Discovery Manager server, including the complete setup and triggering of discovery and discovery refreshes.
- *Event API*—provides a two-way asynchronous messaging interface between the software and other management applications, plus it enables third-party applications to trigger your custom scripts.

Tivoli Application Dependency Discovery Manager SDK features include:

- Java™, Command Line Interface (CLI) scripting and SOAP Wrapper libraries.
- Complete documentation of the software's industry standard-based data center reference model and XML schema.
- Prepackaged integration tools, including libraries for XQuery and XSLT.
- Code integration examples, including sample transformation modules to convert the software's data model to third-party application data representations.

Facilitate data aggregation, querying and reporting

Tivoli Application Dependency Discovery Manager provides a seamless query and reporting framework.

Its advanced analytics and reports include:

- Change history.
- Comparison.
- Inventory.
- Application drift.
- Data center drift.

Furthermore, you can augment application maps with queries into other IT, financial, asset and HR data sources—and use the combined information to help address compliance, governance and service-delivery issues. For example, you can integrate license management data with Tivoli Application Dependency Discovery Manager application maps, to quickly and easily create license compliance reports within your organizations.

Achieve results rapidly

Upon installation of Tivoli Application Dependency Discovery Manager, agent-free discovery starts building your application topology, giving you results within hours. The agent-free approach eliminates the qualification, CPU-load, network-bandwidth and security costs associated with agent-based approaches. The powerful topology and task-driven user interface

mean minimal training costs, time to value and support issues.

Take advantage of enterprise-class security and global scale

During the discovery process, Tivoli Application Dependency Discovery Manager uses industry-standard security protocols—such as Secure Shell (SSH) and Windows Management Instrumentation (WMI). As a result, the software helps protect sensitive data and makes it accessible only by authorized access.

Tivoli Application Dependency Discovery Manager can also perform discovery across firewall zones without compromising security or requiring changes in firewall policy. Data is stored in a secure database and all user and API sessions are access controlled.

Tivoli Application Dependency Discovery Manager provides support for global scale. Large enterprises can deploy multiple servers to manage individual operational instances. The application infrastructure data from individual instances can then be consolidated by the central Tivoli Application Dependency Discovery

Manager portal server to provide an enterprise-wide dashboard view of enterprise IT. Some of the largest and most secure enterprises in the world have leveraged this elegant scaling architecture to successfully manage deployments that represent tens of thousands of application components around the world.

About Tivoli software from IBM

Tivoli software from IBM helps organizations efficiently and effectively manage information (IT) resources, tasks and processes in order to meet ever-shifting business requirements and deliver flexible and responsive IT service management while helping to reduce 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.

For more information

To learn more about how Tivoli Application Dependency Discovery Manager can help you maximize visibility into your complex applications, contact your IBM representative or IBM Business Partner, or visit ibm.com/tivoli

Tivoli Application Dependency Discovery Manager sensors include:

Web servers

- Apache
 - SunONE
 - IBM HTTP Server
 - Microsoft® IIS
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Application servers

- IBM WebSphere®
 - BEA Weblogic
 - JBoss
 - Apache Tomcat
 - IBM Lotus® Domino® Server (including support for Sametime®)
-

Databases

- IBM DB2®
 - Oracle
 - Sybase
 - Microsoft SQL Server
-

Network services

- Lightweight Directory Access Protocol (LDAP)
 - Network File System (NFS)
 - Domain Name Server (DNS)
 - Microsoft Active Directory®
 - Microsoft Windows® File Server (Samba)
-

Hosts and operating systems

- IBM AIX®
- HP-UX
- Linux®
- Solaris
- Microsoft Windows Servers

Network devices

- Load balancers (F5, Alteon)
 - Network firewalls (Cisco, Netscreen, Checkpoint)
 - Routers
 - Switches
-

Storage devices

- EMC Clarion and Symmetrix
 - Brocade switches
 - Support for Host Bus Adapters
-

Third-party configuration providers

- CiscoWorks2000
 - Microsoft SMS 2003
-

Packaged applications

- PeopleSoft
- Netegrity
- Seibel
- Remedy
- SAP



Tivoli Application Dependency Discovery Manager at a glance

Server requirements:

- Solaris 2.8 or 2.9 or Red Hat Enterprise Linux ES/AS 3.0 or SUSE Linux 9
- Two CPUs (more than 1.5GHz)
- 2GB RAM
- 2GB of disk space

Database requirements:

- IBM DB2 Universal Database™ 8
- Oracle 8g, 8i, 9j, 9i, 10g or 10i

Client requirements:

- Web browser
- Java 2 Runtime Environment (JRE) 1.5
- Java Web Start 1.2
- Video card that supports 16-bit color at 1280x1024 resolution

Software development kit client library requirements:

- Tivoli Application Dependency Discovery Manager server
- Operating system that supports JRE 1.4.2 or higher
- 1GB RAM
- 100MB of disk space
- One CPU (greater than 900MHz)

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U.S.A.

Produced in the United States of America
2-06

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