Discover and visualize your dynamic IT Infrastructure

Highlights

- Attain real-time, end-to-end visibility into your complex application infrastructure
- Gain a clear understanding of the dependencies between servers, applications, network devices, software, configuration files, operating systems and other IT infrastructure components
- Integrate discovery capabilities with business operations tools
- Understand change and control its effects across the infrastructure
- Enhance management of physical, virtual and cloud environments

Automated mapping and inventory with IBM Application Dependency Discovery Manager

It's true: you can't manage what you can't see. To get the most from your infrastructure applications and devices, you need to identify and understand what you have. But with ever-growing infrastructure complexity, and with the increasing need to align IT resources and services with business functions and goals, organizations today have to see—so they can manage—more deeply than ever before.

Infrastructure visibility today means knowing not only which applications and devices are deployed across the organization, but how they are configured and connected. It means being able to:

- Identify dependencies
- Constantly see whether applications and devices remain compliant with internal policies and regulatory standards
- Quickly review and visualize data on how applications, interconnections and dependencies have changed over time
- Integrate capabilities and findings with tools for business service management, event management, application performance management and root-cause analysis

On a smarter planet, organizations depend more than ever on IT to support business operations. IT delivers the necessary ability to connect internal and external capabilities, data and equipment. But a poorly understood infrastructure can bring both business and IT operations to a halt. In today's highly instrumented and interconnected world, any

change to an IT component has to be based on a full understanding of how that change can ripple through the entire infrastructure.
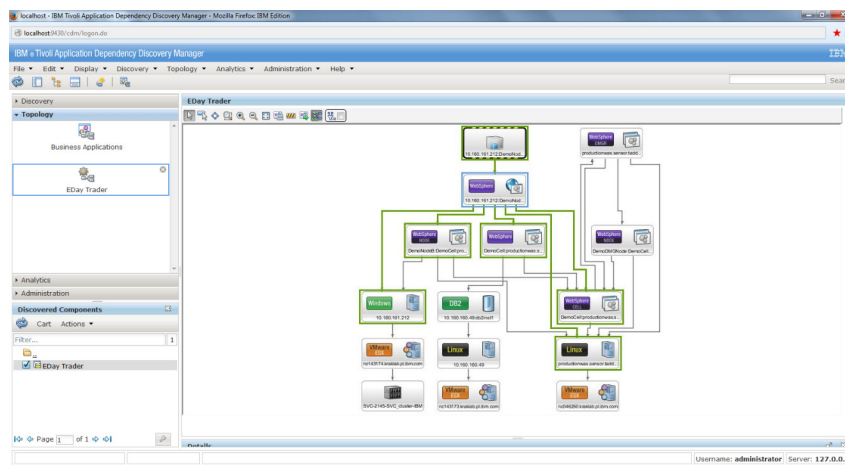
To meet these needs, IBM® Application Dependency Discovery Manager provides robust and automated application mapping and discovery for building an inventory of applications, configurations and dependencies. The solution helps organizations understand the impact of change. It addresses compliance needs with detailed reports and auditing tools.

Understanding how IT changes can affect business services

When change is a constant, how do you know where your IT infrastructure and its support for business stand today? And how do you get to the place you want to be tomorrow? How do you relate configuration changes to event notifications from your availability and performance products? How do you remember all the configurations and know what outages resulted from those changes?

Because the majority of problems in the IT environment are caused by unplanned changes, it makes sense for systems managers to receive automatic notifications when changes occur. However, in most event management systems, the events describe changes in availability, performance and capacity—not configuration changes. IT workloads, which typically focus on issues such as managing performance, also make it difficult to review and act upon each individual change.

In order to discover configurations, you need to accurately assess what infrastructure changes have been made since applications and devices were deployed. You'll also need to determine how those changes impact business services. You'll need IT management tools that both provide a dynamic and integrated view of the interdependencies that underpin services and also help govern the end-to-end availability of business services in an integrated fashion.

IBM Application Dependency Discovery Manager can map an order management business application to show interdependencies between discovered infrastructure applications.

Getting the depth of discovery you need with discovery profiles

The software's discovery profiles offer users the flexibility and power to manage discovery in accordance with their needs. These profiles are used to specify three choices: where you want to discover, what you are looking for and how deep you want to probe. You can phase in your discovery process—starting with a level-1 lightweight, credential-free discovery of hosts, operating systems and network components—by inspecting the network stack and identifying components by their signatures. This information can be leveraged as a

blueprint showing where you want to conduct deeper discovery. Next, using a level-2 scan, you can probe deeper and capture the configurations of computer systems and application dependencies. Finally, using a level-3 scan, you can perform a deep-dive discovery and capture application configurations.
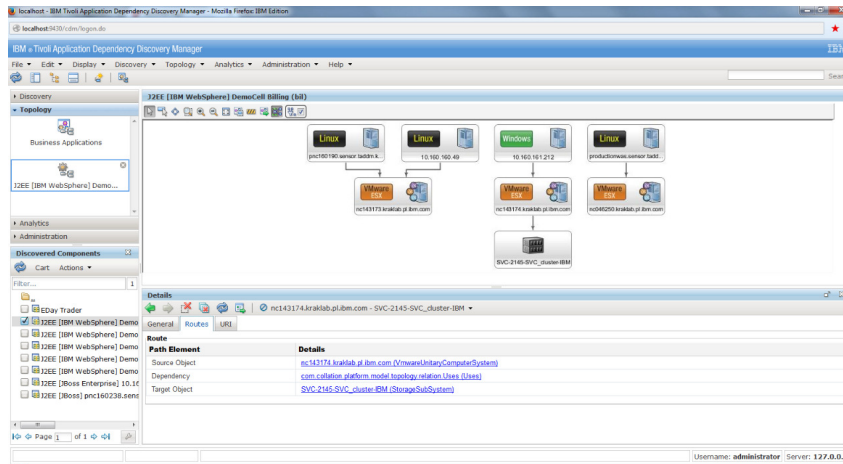
The agentless discovery provided by IBM Application Dependency Discovery Manager allows you to greatly reduce the CPU load, network bandwidth, and maintenance and security costs associated with agent-based approaches.

Using top-down insights to benefit IT and the business

Much more than simply a visibility tool, IBM Application Dependency Discovery Manager helps IT administrators understand the structure, status, configuration, and change history of their interdependent business applications. Using these insights, administrators then can complete a number of critical tasks, including:

• Rapidly isolating configuration-related problems with applications.

• Proactively addressing potential failures using knowledge of how incidents can expand via dependencies.

• Addressing the impact of component-level events to sort issues based on application and service impact.

• Planning change so that application upgrades and deployments can occur without disruptions.

• Creating a shared topological definition of applications for use by other management applications, such as service level managers and provisioning tools.

In graphing interdependent business applications, IBM Application Dependency Discovery Manager shows where one or more members of a business application have an observed dependency on a member of another business application.

Successful management of these and related application management tasks can then lead to specific and tangible benefits for both IT and the business, including:

• 50 percent reduction in mean time to repair by quickly identifying and isolating configuration changes that affect service.

• 10 to 20 percent reduction in deployed application rollbacks due to a better understanding of configuration item dependencies before changes are made.

• 84 percent reduction in the time required to inventory IT assets.

• Improved energy efficiency and reduced energy costs through the ability to consolidate and optimize devices.*

Integrating with operational solutions for enhanced alignment

In providing visibility into business applications and the supporting infrastructure, IBM Application Dependency Discovery Manager discovers and stores information on configurations and dependencies for applications, middleware, servers, storage devices and network components. This data not only can help the IT organization understand changes and their impact, it also can be shared across operational management products, teams, and processes, and integrated with other IBM service management solutions.

The software works with solutions such as IBM Business Service Manager, IBM Service Request Manager, IBM Monitoring, IBM Netcool®/OMNIbus and Network Manager, IBM Provisioning Manager, IBM Storage Productivity Center, the IBM Composite Application Manager software suite, and many more.

IBM Application Dependency Discovery Manager also works with performance management, change management and event management solutions from other vendors, providing valuable insights and capabilities for heterogeneous environments.

Managing business service levels with real-time visibility

Before performance and availability issues can be resolved, effective management of business service levels requires the ability to identify what has changed in an application.

IBM Business Service Manager, for example, can provide real-time service maps to help the organization visualize the health of business services, automate business service impact and track key performance indicators. IBM Application Dependency Discovery Manager indicates which infrastructure components comprise these services and the changes that could affect business service health. It can automatically discover components and their dependencies, and then feed this information to IBM Business Service Manager.

When used together, IBM Business Service Manager and IBM Application Dependency Discovery Manager help align IT with business by systematically modeling and maintaining business services. Correlation of changes to configuration and dependencies with performance or incident data in IBM Business Service Manager delivers the context organizations need to take action and gain a meaningful understanding of their business services.

Effectively monitoring your most critical resources

A lack of visibility into monitoring coverage can create major disruptions in today's IT environment. Using IBM Application Dependency Discovery Manager alongside monitoring software, however, enables you to:

• Discover IT resources and their dependencies.
• Understand which resources are not being monitored.
• Initiate dispatch of an agent for IBM Monitoring to enable deeper diagnostics where coverage is absent.
• Launch in context to IBM Monitoring for performance and availability metrics.
• Detect underutilized servers.

Understanding which events affect business systems

Most problems in the IT environment are the result of unplanned changes. Without assistance, it is simply impossible for a person to remember all the configurations and which events—such as outages—result from which changes. But with conventional availability and performance products, problem management still can be a challenge, because it can be difficult to relate configuration changes to event notifications.

The configuration and dependency data in IBM Application Dependency Discovery Manager can be correlated with events and incidents as they arise, expediting triage and resolutions processes. Operations teams can also be alerted to potentially service-impacting changes, enabling proactive assessments that help avoid potential incidents that may be caused by those changes.

Enhancing management across application functions

The solution's logical views of how the IT infrastructure delivers business-critical applications supports a number of key functions that enhance IT service management. The ability to create and maintain logical topology views that describe runtime dependencies, deep configuration values and accurate change histories supports a wide range of business applications and processes, including:

• **Configuration auditing:** Tracks application changes, depicting that information on application maps and reports, and delivering comprehensive visibility into configuration drift.
• **Compliance:** Helps ensure that computer systems remain compliant by comparing the configurations of discovered objects to a "reference master" to reveal policy violations.
• **Virtual and cloud environments:** Provides the ability to view, govern and understand how virtual and cloud environments are used effectively within enterprise environments by discovering hosts and guests as well as identifying the resource capacity allocated to guest systems.
• **Proactive modeling:** Complements the use of predictive analytics to predict service outages with sufficient lead time to avoid potential business impact.
• **Time to resolution:** Reduces troubleshooting time and workload by recording changes that have been made at the individual component level, at the application level and at the service level between discovery executions.

IBM Application Dependency Discovery Manager works in any type of IT infrastructure, integrating with a full variety of IBM-based and third party management products, including those for

application performance and availability management, application development, network and systems performance, network and systems configuration, service desk/service catalog, LDAP directories, and asset management.

Many enterprises have attempted to manually link the relationships between infrastructure and services, but due to the large volume of data and its inherent volatility, manual efforts are simply unable to keep up. Automation is essential to creating this linkage and scaling it to the needs of large businesses. The flexible approach provided by IBM Application Dependency Discovery Manager gives users the visibility and agility necessary required to improve service availability, and provides key resources for aligning IT with business goals.

For more information

To learn more about IBM Application Dependency Discovery Manager, contact your IBM representative or IBM Business Partner, or visit: **ibm.com**/tivoli