



# EMC Smarts Application Discovery Manager in Academia

## Enlightening IT staff, improving service levels in educational institutions

### Introduction

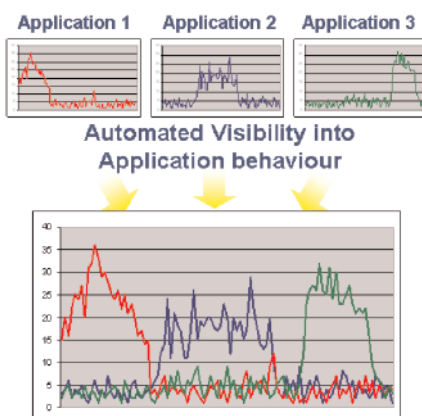
Nowhere have Internet technologies had such profound impact on an industry than in the world of education. Only a few years ago, universities functioned as learning centers for students physically residing within the campus buildings. The proliferation of the Internet, wireless, and other ICT technologies has created a new paradigm for the ways in which education is delivered to and consumed by students. The advent of distance learning via a virtual classroom has enabled more students to share and participate in the learning process. No longer do students have to physically reside at the campus to take a course—now they can do so from their own home, on their own time schedule. While this is a tremendous asset to universities who can expose their educational courses to a larger audience, it has also created new demands on the IT support infrastructure required to fulfill this demand.

- Enrich your configuration management database (CMDB) with realtime dependency mapping
- Quickly correlate infrastructure incidents to application impact
- Accurately manage change impact
- Precisely manage configuration drift

### Business Challenge

For many universities there are core applications such as student enrollment, course registration, exam grading, and portals for collaboration and e-mail that require continuous high availability. In addition, there are many other applications running within and across departments which might not be deemed mission-critical—yet are important to the success of the department and must be supported as well.

Many IT operations teams often find it difficult to understand the relationships and service dependencies among these various applications (i.e., which ones are deployed, in which locations, by which departments, by which users, during what times). Just understanding the IT environment needed to support the various departments is a cumbersome, labor-intensive task and is further complicated by a lack of tools to help staff quickly and efficiently correlate related applications and data flows within their multi-tiered architecture environment.



### Solution Overview

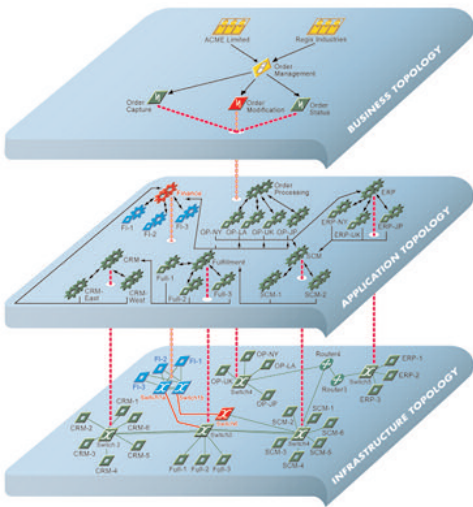
EMC® Smarts® Application Discovery Manager is quickly gaining acceptance in the education marketplace for realtime, automated application discovery, modeling, and dependency mapping. Application Discovery Manager provides users with an easy-to-implement, cost-effective way to discover, map, and manage the complex relationships

between applications and the IT infrastructure. By maintaining a realtime, interactive model of the entire application infrastructure, Application Discovery Manager provides extensive visibility into the organization—helping users to more effectively support business processes.

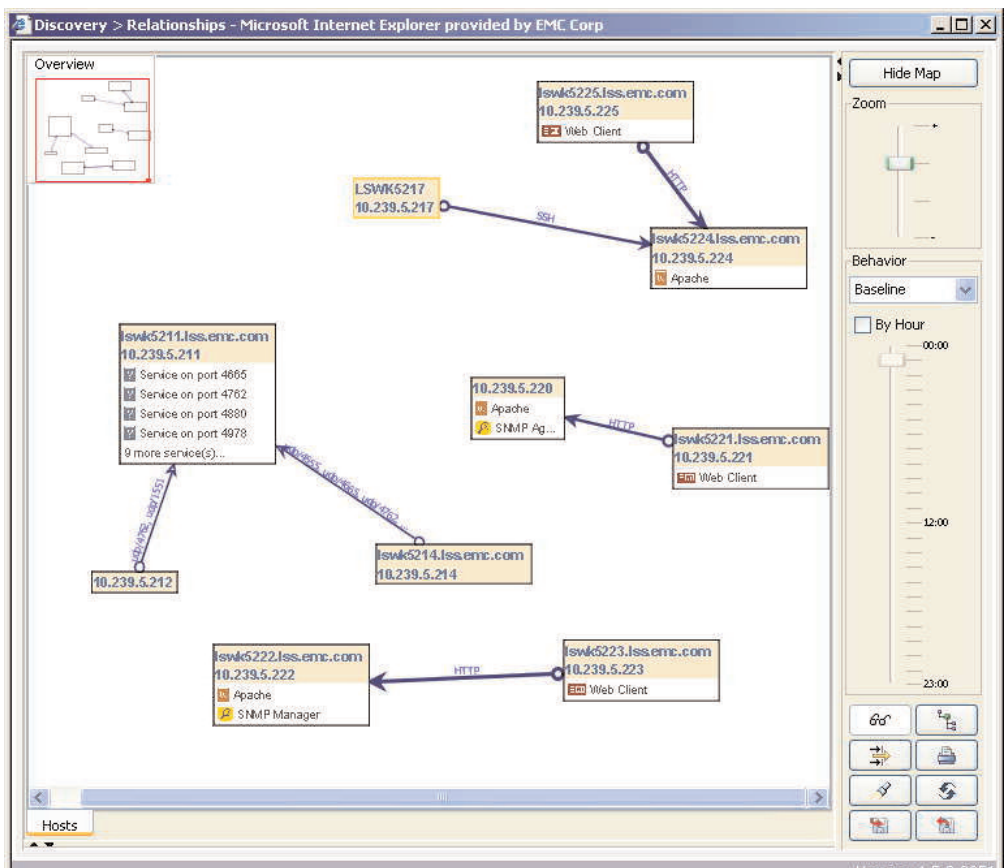
Application Discovery Manager’s realtime dependency mapping capability eliminates reliance on error-prone manual processes and data gathering, which in turn reduces change-induced service outages, degradations, and failures. IT organizations can detect, log, and report on software and hardware configuration changes, and compare them on a server-to-server basis—without the need for any server-side agents.

Additionally, the information collected by Application Discovery Manager can be federated to a realtime Configuration Management Database (CMDB). This capability allows educational institutions to accurately manage the impact of changes and infrastructure incidents across multiple data centers and throughout the information infrastructure.

And, with its native EMC Smarts integration for model-based root-cause analysis, users can quickly correlate infrastructure incidents to application impact based on realtime models of application topologies and dependency relationships. This helps improve application availability by leveraging the power of automation to more quickly resolve incidents in the information infrastructure.



Application Discovery Manager automates mapping from infrastructure to application to business.



EMC Smarts Application Discovery Manager models and maps applications and their behavior and continuously updates its application behavior model.

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## Application Discovery Manager features include:

- **High-Definition Discovery:** Automatically discovers and maps J2EE applications, their modules and components and relationships. The solution also discovers and maps granular components within packaged enterprise applications, documented and active dependencies, intraserver relationships, and multiple instances of installed application server and database applications.
- **Automated Fingerprinting of Custom Applications:** Using Fingerprints™, Application Discovery Manager uniquely identifies hundreds of common packages and applications out-of-the-box. For educational institutions with custom applications, the solution's new heuristic fingerprinting recognizes common n-tier application interactions and automatically groups and maps them without prior knowledge of that application.
- **Open Reconciliation Engine:** Enables customers to reconcile CMDB data across diverse discovery sources. The software automatically stages and reconciles the data before it is allowed to enter the CMDB, ensuring all configuration information is accurate, current, and clean.
- **Dashboards and Analytics:** New CMDB dashboards provide a quick status of the CMDB environment using graphs, charts, and tables that summarize discovery information and track changes that have occurred in the application environment over time.
- **Extensibility:** By adding federation and reconciliation, customers gain a single view of all CMDB data, regardless of where the data resides. Instead of feeding all system and component information into a single repository, new federation capabilities enable customers to integrate Application Discovery Manager into in-house or third-party CMDB deployments, or leverage the solution as a truth-based, reconciled CMDB system of record.
- **Distributed Data Center Deployment:** To meet the needs of geographically dispersed and affiliated educational institutions, Application Discovery Manager offers a distributed architecture—along with software to support data aggregation and reconciliation across data centers—enabling the solution to scale in the most complex and dynamic networks.

Value to Network Operations Managers	Value to Line of Business/IT Infrastructure Managers
Automated visibility into application behavior	Improve service levels and availability and reduce operational costs through improved management of the impact of changes and infrastructure incidents, and by using usage patterns to determine software licensing requirements
Discover applications and capture their relationships and dependencies	Decrease risk associated with data center automation and disaster recovery projects by automatically discovering and mapping critical applications and their relationships, and eliminating error-prone manual data gathering
Repository of discovered information maintained for audit and compliance	Maximize resources and minimize vulnerabilities through better understanding of application dependencies

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“ We are accountable for the security and compliance of all the various systems we support.

Basically, EMC Smarts Application Discovery Manager ‘turns on’ and dynamically creates an application dependency diagram that gives us the visibility we need to prepare for audits and ensure all off the applications are compliant—even those that are managed by outside vendors.”

**David O’Neill, Executive Director**

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## Case Study

### *Boise State University*

#### Challenge

To gain a better understanding of how IT services are deployed and used across the university’s application infrastructure.

#### EMC Solution

Application Discovery Manager gives the university a complete, big-picture view of its network, components, and applications; enables it to closely map and track specific application systems; and helps it compile a comprehensive inventory of the its applications—including actual usage information.

#### Business Benefits

- **Ease of management**— Application Discovery Manager shows the demand, usage, and the relationships between applications and infrastructure for easier management of a complex environment.
- **Fast problem discovery**— Application Discovery Manager enables IT operations to gain a granular understanding of how the applications function within the university’s network, and uncover possible compliance issues or other vulnerabilities.
- **Optimized operation efficiency**—Getting to the “who, what, where, when, and how” of the information infrastructure—by tracking all of the relationships between applications and infrastructure components—enables the university to maximize resources and minimize vulnerabilities.

## How EMC Smarts Delivers Value for Campus Environments

Together with other cross-domain management solutions from EMC Smarts, Application Discovery Manager allows customers to view network, storage, and server resources in the context of their distributed business applications. By linking the power of model-based resource management with application awareness, EMC Smarts can quickly pinpoint how infrastructure incidents and configuration changes affect business service availability. It is the most comprehensive tool for discovering and mapping the dynamic relationships among services, applications, and technology infrastructures.

## Summary

EMC Smarts Application Discovery Manager is a key component of EMC’s Resource Management product portfolio. EMC Resource Management products enable thousands of enterprises to monitor, report, and provision their information infrastructures to improve service levels and optimize network and storage utilization. EMC’s storage, network, and application management products are widely recognized as the leading applications for resource management.

## Take the Next Step

To find out how EMC Smarts Application Discovery Manager can improve service levels and IT management in your institution’s information infrastructure, contact your local EMC representative or visit our website at [www.EMC.com](http://www.EMC.com).



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Solution Overview  
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