

EMC Smarts Application Discovery Manager Solutions for Healthcare Environments

Business Challenges

The adoption of electronic care processes continues to make a profound impact on healthcare delivery as online solutions accelerate clinical workflow and turnaround times, reduce cost, manage risk, and improve patient care service levels. From the deployment of electronic medical records, digital imaging, CPOE, and patient web portals to wireless technologies, a new online paradigm is being created as healthcare information is delivered to and consumed by clinical decision makers, patients, and their families. While improved information sharing is a tremendous asset for patient care collaboration, it also creates additional complexity and new demands on the IT support infrastructure required to manage this IT environment.

To meet required patient care service levels, healthcare IT staff must sustain high levels of information availability to support continuity of care, including support for clinical applications such as EMR, Cardiology and Radiology PACS, and CPOE. And at the same time, provide IT support for business applications such as e-mail, billing, and insurance eligibility—all important to the operational success of the healthcare organization.

The challenge for many healthcare IT organizations is how to simplify the relationship and service dependencies between clinical and business applications. This challenge can become very real when a network or system outage occurs and the “restart process” cannot be completed without a thorough understanding of the impact on all of the applications that are dependent on a failed system. Understanding the IT environment needed to support the various clinical departments is often labor-intensive and complicated as there may be a lack of online tools to help staff quickly and efficiently correlate related applications and data flows within their complex systems environment.

With the recent widespread adoption of virtualization strategies to provide operational benefits, an entirely new healthcare IT management challenge arises—understanding an IT environment that includes virtual-to-virtual and virtual-to-physical dependencies. Whether compliance in the IT environment is defined through best practices, internal governance, or external regulations such as HIPAA, healthcare organizations are under increasing pressure to establish and maintain compliance requirements. In the networked healthcare organization, patient data, insurance information, and billing records demand strict adherence to policies that reduce vulnerabilities, lawsuits, and penalties for non-compliance.

Solution Description

EMC[®] Smarts[®] Application Discovery Manager Solutions for Healthcare Environments are being implemented as tools for realtime, automated clinical and business application discovery, modeling, and dependency mapping across physical and VMware[®]-enabled virtual environments. Application Discovery Manager provides IT managers with an easy-to implement, cost-effective way to discover, map, and manage the complex relationships between clinical and business applications and the IT infrastructure. By maintaining a realtime, interactive model of the entire application infrastructure, Application Discovery Manager provides extensive visibility into the healthcare system—helping users to more effectively support online 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. Healthcare IT organizations can now 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 healthcare organization's realtime Configuration Management Database (CMDB). This capability allows the hospital, medical center, and Integrated Delivery Network (IDN) 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, users can correlate infrastructure incidents to application impact through visualization of realtime application dependencies with service components and server infrastructure. This helps gauge and manage the impact of these incidents on applications and end users.

By coupling Smarts Application Discovery Manager with EMC IT Compliance Analyzer—Application Edition, healthcare organizations can leverage the data provided by ADM to create custom IT policies and benefit from continuous compliance analysis and realtime policy violation alerts. These highly flexible policies can be used to help ensure compliance with industry regulations such as HIPAA, Joint Commission, internal governance and/or best practices in the IT environment.

The EMC Smarts Application Discovery Manager includes six features:

High-Definition Discovery

Automatically discovers and maps clinical and business applications, their modules and components and relationships. The solution also discovers and maps granular components within packaged enterprise applications, documented and active dependencies, intra-server relationships, and multiple instances of installed application server and database applications, inclusive of virtual-to-virtual and virtual-to-physical relationships in VMware-enabled environments.

Fingerprinting of Clinical and Business Applications:

Application Fingerprints™ uniquely identify common applications components and protocols out of the box, for accurate and complete mapping of the application services. In addition, Application Discovery Manager's Application Patterns recognize common n-tier application interactions and automatically group and map these applications.

For large healthcare systems with custom applications, Application Discovery Manager offers an Application Patterns definition user interface that enables users to define their own patterns for n-tier applications. A user can specify a grouping of hosts that make up an application and then discover all instances of that application and related hosts in the environment.

Open Reconciliation Engine

Enables healthcare organizations 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, healthcare organizations 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 organizations large and small 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 healthcare organizations such as IDNs or regional healthcare systems, Application Discovery Manager offers a distributed architecture, enabling scalable, worldwide deployments—along with software to support data aggregation and reconciliation across data centers—enabling the solution to scale in the most complex and dynamic healthcare networks, dramatically reducing the complexity of managing these environments.

Solution Value

Together with other domain management solutions from EMC, EMC Smarts Application Discovery Manager Solutions for Healthcare Environments enable healthcare organizations to:

- View network and storage resources in the context of their distributed business applications
- Establish and maintain compliance in the IT environment
- Link the power of model-based resource management with clinical and business application awareness to quickly pinpoint how infrastructure incidents and configuration changes affect information flow for better patient care service availability
- Discover and map the dynamic relationships between services, clinical applications, and technology infrastructures

EMC Smarts Application Discovery Manager is a key component of the EMC Resource Management product portfolio that helps enable healthcare organizations to monitor, report, and provision their information infrastructures to improve IT 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.



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Getting Started

To find out how EMC Smarts Application Discovery Manager can improve service levels and IT management in your healthcare organization's information infrastructure, please contact your local EMC account manager or visit our website at www.EMC.com/Healthcare.