BMC Atrium Discovery and Dependency Mapping

Automatically discovers physical and virtual servers, applications, and network devices — and the relationships between them — enabling significant cost reductions and dramatically simplifying asset management, CMDB, data center consolidation, disaster recovery, and change and release management initiatives.

**Key Benefits**

» Gain an up-to-date view of dependencies and relationships that make up IT and business services
» Reduce troubleshooting time and improve productivity
» Minimize service outages and improve agility by more accurately scoping, assessing risk, executing, and verifying configuration changes
» Ensure the accuracy of CMDB data through seamless, out-of-the-box integration with the BMC Atrium CMDB
» Resolve the most urgent incidents faster by using topologies and impact modeling to associate and prioritize incidents by business service criticality

**Business Challenge**

IT organizations consistently struggle to accurately answer two fundamental questions about their data centers, “What do I have?” and “How is it connected?” Manual audits typically capture, at best, 75 percent of the IT inventory. Not only are they completely impractical from a time and cost perspective, but they are also out of date the moment they are complete. Now with virtualization increasing the volume and frequency of change, it’s even harder to maintain control. The result? Too much guesswork and too little hard data lead to inaccurate inventories, failed changes, longer problem resolution times, and ineffective disaster recovery plans.

**The BMC Solution**

BMC Atrium Discovery and Dependency Mapping enables you to easily answer the question “What do I have?” by discovering details about your IT infrastructure, including accurate hardware and software inventory information on servers and network devices. It also helps you answer the next question, “How is it connected?” by identifying the interdependencies and automatically building application dependency maps that show how the IT infrastructure supports business services.

BMC Atrium Discovery and Dependency Mapping uses an agent-less approach to build a complete topology of your applications and infrastructure, including servers, operating systems, software, network devices, business applications, and dependencies, and updates it as often as you need. It discovers Windows, Linux®, UNIX®, and Netware environments using standard management protocols, such as SSH, WMI, and SNMP. The product uses a z/OS discovery agent to quickly inventory the z/OS platform and all major software subsystems. And, through out-of-the-box integration with the BMC Atrium CMDB, you will deliver accurate resource and relationship information to your Business Service Management applications and processes.

The product ships as a fully-installed and ready-to-run virtual machine, including a self-contained data store, minimizing your deployment effort and cost. Discovery is configured simply with an IP range, a schedule, and a set of credentials. What’s more, BMC Atrium Discovery and Dependency Mapping gives you control over the scan level, ranging from a simple sweep scan to full discovery.

**Discover**

Template-based discovery solutions are too rigid and simplistic for today’s rapidly changing IT infrastructures. BMC Atrium Discovery and Dependency Mapping uses ‘patterns’ created in the ‘Technology Pattern Language’ or TPL for short. Simple, powerful, and open, the pattern language codifies expert knowledge, such as the investigative, exception-handling, filtering, and interpretation processes used by system administrators. These patterns:

» Provide the flexibility to recognize everything from simple software processes to custom applications to highly complex multi-tiered business applications
» Adapt easily to new technologies without changes to the core code
» Run commands, interrogate files, and perform registry, WMI, or XPath queries to obtain detailed configuration information
BMC Atrium Discovery and Dependency Mapping ships with the industry’s most extensive knowledge library containing more than 32,000 product configurations. Working in partnership with key infrastructure vendors, BMC adds new patterns to the library every month to provide the broadest and deepest data center coverage. BMC also hosts an active user community where members both consume and contribute new patterns, creating a community network effect that rapidly increases the size and scope of available patterns.

For a strategic discovery product to be successful, stakeholders must have complete confidence in the data. BMC Atrium Discovery and Dependency Mapping is the only product that provides a provenance capability. This innovative feature enables you to verify any discovered item in the system and see both the commands issued to the target system as well as the data returned. This provides hard evidence proving that the discovered item exists as shown, and thus provides immediate credibility to the data.

Analyze
BMC Atrium Discovery and Dependency Mapping identifies the interdependencies between IT hosts by analyzing the network communication between them. It then automatically groups them together according to the applications they support. By drilling into an Automatic Host Group, you will see all the servers in the group, how they are communicating, and with whom they are communicating. You can also organize hosts and other discovered items into manual groups specific to your need; for example, to specify a group of servers for a data center migration project.

After discovering the components and relationships of business applications, the product uses patterns to automatically build an application dependency map based on that information. It also continuously scans for changes in the components and relationships, updating the dependency map accordingly. Then through direct integration, it automatically populates its results into the BMC Atrium CMDB.
In complex virtual environments, BMC Atrium Discovery and Dependency Mapping can launch targeted discovery scans “on demand” in response to specific events, such as the dynamic move of a virtual machine. Following the targeted scan, the solution automatically transfers the updated resource and dependency information to the BMC Atrium CMDB, which continuously reconciles the data with the appropriate service model, resulting in service models that are as dynamic as your environment and constantly up to date.

Visualize
A combination of reports, dashboards, and search capabilities provide powerful tools for data analysis and exploration. BMC Atrium Discovery and Dependency Mapping enables you to slice, dice, and analyze your data with a set of analytical tools right in the browser. Everything in the data store is searchable, including custom attributes. Advanced search functionality lets you narrow your searches to specific object types. For power users, the product provides the richness of a Search Query Language. All searches are exportable in XML and CSV formats so that data can be easily shared.

BMC Atrium Discovery and Dependency Mapping provides a complete set of out-of-the-box dashboards, charts, reports, and visualizations, which deliver valuable information about your data center right away. Existing dashboards can be customized to suit your needs or you can easily create new custom dashboards. A sample of existing dashboards includes:

- **Baseline Dashboard** — Provides a summary view of your data center
- **Software Products Lifecycle Dashboard** — Supports software license compliance and provides a breakdown of software products by publisher, category, and end-of-life date
- **Virtualization Dashboard** — Provides an overview of software running on virtual machines and the physical hosts on which the virtual machines are hosted
- **Hardware Reference Data Dashboard** — Identifies devices that consume excessive power; provides information on a host’s compute power, watts; and BTU/h per U size

Integrate
BMC Atrium Discovery and Dependency Mapping is part of BMC Atrium, the foundation of BMC’s platform for Business Service Management (BSM). Through a direct integration, BMC Atrium Discovery and Dependency Mapping automatically and continuously populates its results into the BMC Atrium CMDB, thus enabling other solutions to leverage the physical and logical dependency data collected. As the “single source of truth” for your IT infrastructure, the BMC Atrium CMDB ensures that all users consuming the configuration and service model information are presented with the same up-to-date information.
With an accurate picture of your IT environment, you can:

» Confidently consolidate and move data centers
» Lower costs by avoiding over-provisioning and ensure software license compliance
» Gain an up-to-date view of dependencies and relationships that make up IT and business services
» Minimize risk by understanding the impact of changes on services and assessing regulatory compliance status
» Increase availability by speeding problem resolution, improving change execution, and prioritizing actions based on complete and up-to-date information

Fastest Time to Value
You want ROI results fast. BMC Atrium Discovery and Dependency Mapping pays for itself — sometimes in as little as 30 days. Customers regularly achieve a 5x ROI within 90 days. You can rapidly identify opportunities for cost savings in hardware and software and avoid the cost of downtime by uncovering potential risks.

One Day - Server Inventory
Because BMC Discovery is delivered as a virtual appliance, there is no database to install and configure, no drivers to choose, no operating systems to patch, and no Apache servers to set up. By the end of your first day, you’ll have a good understanding of the server and network inventory across the infrastructure, including an estimated server count and a list of which machines (by DNS name or IP) are running which operating systems.

One Week - Infrastructure Baseline
After one week you’ll have an accurate server and network count, understand all definitive and alias host names, and know which operating systems are on each host, including patch level information. Software inventory will also be clear, including instances of software products and their versions. This will help you manage software licenses more effectively, mitigate risks of un-patched or non-compliant software versions, and perform fast diagnostic troubleshooting.

One month - Application Dependency Maps
In less than 30 days, you will have mapped some of your business applications showing precisely how IT components — switches, routers, servers, hardware, and software — correlate to them. Now, you’ll be able to easily demonstrate how business applications are supported by IT infrastructure end-to-end — a growing requirement for regulatory compliance. Change and problem management processes will also be more efficient now that you can rely on an automated view of dependencies between all hardware and software components and quickly determine their impact on business applications.

Part of a Comprehensive Discovery Solution
BMC Atrium Discovery and Dependency Mapping is part of the comprehensive BMC Discovery Solution. The BMC Discovery Solution is an integrated toolset that unifies the process for discovering the broadest range of IT assets — physical, virtual, mainframe, client, and cloud — documenting the relationships among them, and continuously updating the BMC Atrium CMDB to reflect dynamic changes to that data. By unifying these comprehensive discovery capabilities into a unique and integrated solution, BMC ensures that you always have an accurate picture of your IT environment, and eliminates the need for fragmented tools that require cumbersome and error-prone manual steps.

For More Information
For more information on BMC Atrium Discovery and Dependency Mapping, please visit www.bmc.com/discovery.