BMC Atrium CMDB Solution Profile

EMA's CMDB IT Solutions Center Profile of BMC Atrium
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ENTERPRISE MANAGEMENT
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Table of Contents

EMA Viewpoint 1
At a Glance 2
- CMDB Type: 2
- Areas Supported: 2
- IT Domain: 3
- Target customers: 3
- Product diagram: 3

Market Focus and Standards 4
- Best Practices 4
- Standards 4
- IT Service Management Support 4
- Vendor Services Offered 4

Product Summary 5
Structural Analysis: Concept and Design 6
- Configuration Items 6
- CMDB population 6
- CI Logical Relationships 7
- Data Schema 7
- CMDB Maintenance 7
- Management Data Repository 7
- Federation 7
- Open Access 8
- Integration 8
- Remediation and Reconciliation 8
- Performance and Scalability 8
- Security 8
- Analytic Capabilities 8
- Automated Actions 9
- Information Conveyance 9
- Alignment with Business Services 9

Features 9
- Distinguishing Features 9
- Future Directions 10

Operations 10
- Operating systems supported: 10
- Pricing/Maintenance: 10

BMC Company Info 11
- Corporate Address: 11
- Corporate Phone: 11
- Corporate Website: 11
- About BMC 11

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EMA Viewpoint

EMA has long been a strong supporter of the value of process for IT. The Business Service Management (BSM) approach introduced by BMC Software has developed nicely over the last two years, maturing from a conceptual-based program to sophisticated BSM Workflows that provide real-world process workflows across all of the ITIL disciplines. This same maturity is evident in the company's BMC® Atrium™ CMDB offering, now the heart of its BSM solutions. The BMC Atrium CMDB exposes not only infrastructure complexity but also critical service dependencies in an easy-to-understand manner to help beleaguered IT professional across the enterprise.

Rather than taking the simpler route of retooling the data stores of its wide range of IT Service Management products, BMC built the BMC Atrium CMDB from the ground up using next generation object-oriented design and open standards. One of its competitive advantages is seen in the roots of this design. Based on DTMF's Common Information Model (CIM), BMC has taken a pragmatic approach to their Common Data Model (CDM). Unlike many of its competitors whose "core" CMDB contains every possible data element imaginable, BMC has limited the BMC Atrium CMDB to a simple set of fundamentally core data elements. From this, companies can create Extended Data models based on their needs. A third tier of data comprises what BMC calls its CMDB Environment data, including many third-party feeds. By providing this structured, prioritized approach, BMC Atrium CMDB customers are encouraged to avoid the common pitfall of "data glut and information dearth."

While many customers were underwhelmed by the previous BMC Discovery Express product, EMA feels that the company has made significant progress with BMC® Foundation Discovery, its second-generation tool for providing automated IT infrastructure data to the CMDB. With this product, as well as with BMC® Configuration Discovery, BMC® Identity Discovery, BMC® Topology Discovery, BMC® Discovery for Mainframes, and BMC® Discovery for Business Processes, BMC now has one of the most diverse and powerful set of technologies to help customers find and map not only physical devices and services, but also roles and process workflows. BMC has developed a very comprehensive Discovery solution with the purpose of enriching the BMC Atrium CMDB by automatically discovering people, business process, and IT infrastructure data to provide an up-to-date picture of the IT environment, the people who depend upon it, and the business processes that make up critical business services. In a hot Discovery market segment where vendor consolidation is just beginning to occur, BMC has a solution on the ground running. Using a combination of agent-based and agentless discovery, the BMC solution spans the entirety of needs from small businesses to even the largest and most complex IT organizations.

Acknowledging that the BMC Atrium CMDB must work as one component of a larger environment containing dozens of "citizen" CMDBs, EMA applauds the approach BMC has taken to federation and integration. Its federation schema allows all CI data to be passed as parameters to other CMDBs. The BMC Atrium CMDB Product Registry is available for commercial integration, and further integration is possible via C, Java and Web Services APIs. While it is expected that the BMC Atrium CMDB would integrate with the BMC® Remedy® IT Service Management Suite, BMC® Service Impact Manager and the other BSM solutions, a number of third-party integrations also exist. EMA expects that BMC will continue to take an aggressive approach to partner integrations. Integration within the BMC solution allows for very powerful aggregation analysis via the BMC Dashboards for BSM. Coupled with the focus on "why did it happen, not what happened" analytics with BMC Analytics, EMA feels that BMC sets the bar high for other CMDB vendors to match. The BMC Atrium CI Browser and Relationship Viewer provide views into both BMC and non-BMC data, another distinguishing feature of the solution.

In EMA's opinion, while Atrium is bundled with many of the BMC solutions such as Remedy Service Desk, the price and complexity of implementing the BSM solution is not trivial. While some complexity is expected in any software of BMC's sophistication and scope, many customers are reluctant to bite off another large consulting engagement for their CMDB implementation. EMA applauds BMC's route to value approach of implementing the CMDB in small, manageable steps. This closely mirrors EMA's own consulting approach and has shown great success at enterprise client sites. BMC also offers a full range of consulting and best practice engagements. Overall, EMA feels that BSM solutions from BMC — with the BMC Atrium CMDB at their core — provide excellent value across all ITIL disciplines and the most demanding IT organizations.

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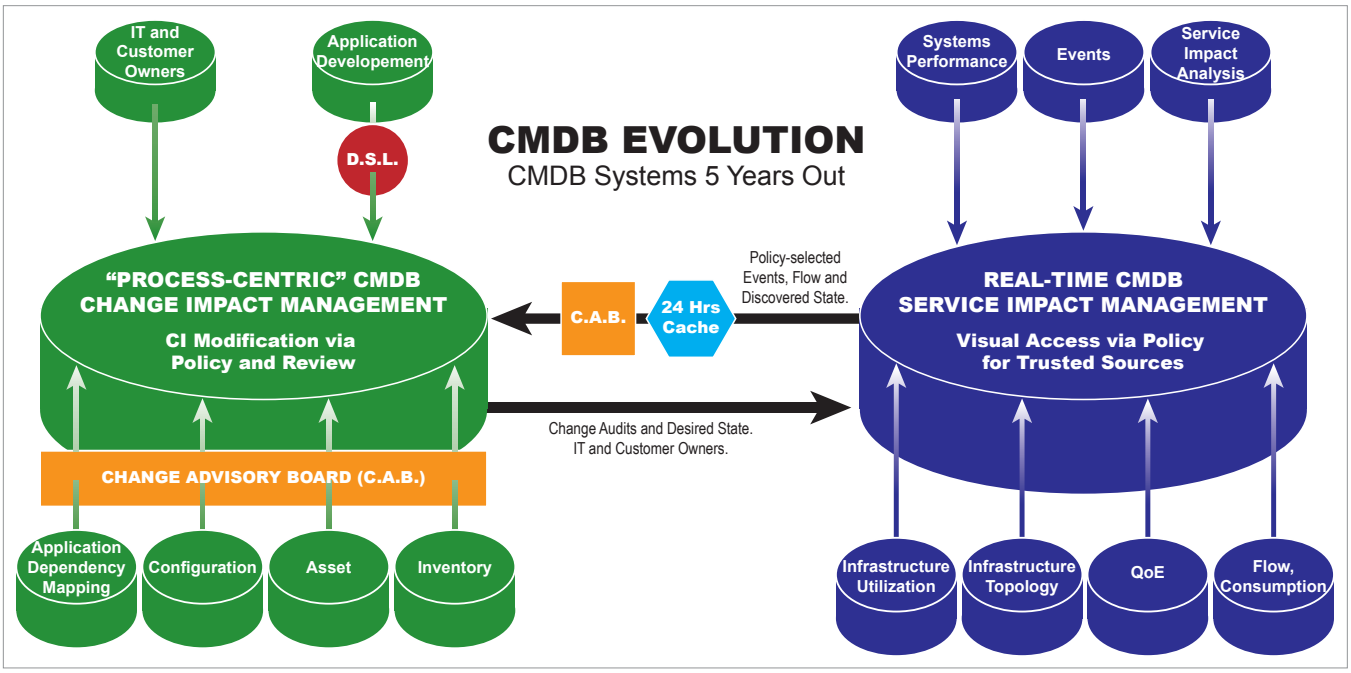
At a Glance

The figure below is not meant to be architectural in any way, but reflects a logical view of what CMDB evolution is likely to look like over the next five years. After that time, improving technologies and standards may change some of the dynamics, or in contrast, market evolution may continue to move in this direction. The model is based on EMA's synthesis of its many working relationships with CMDB adopters, combined with the focused research and dialogs contributive to this report. This drawing may also serve as a market road map, as different vendors typically play to different areas within this logical CMDB schema. IT adopters can therefore see what types of solutions may fit best where.



This graphic describes the two basic types of CMDBs that EMA sees in the market

CMDB Type:

Process-Centric	X
Real-Time	X
Other (explain)	

Areas Supported:

Application Dependency Mapping	X
Configuration	X
Asset	X
Inventory	X
Application Development	X
Infrastructure Utilization	X
Infrastructure Topology	X
QoE	X
Flow, Consumption	X
Systems Performance	X
Events	X
Service Impact Analysis	X
Other (explain)	

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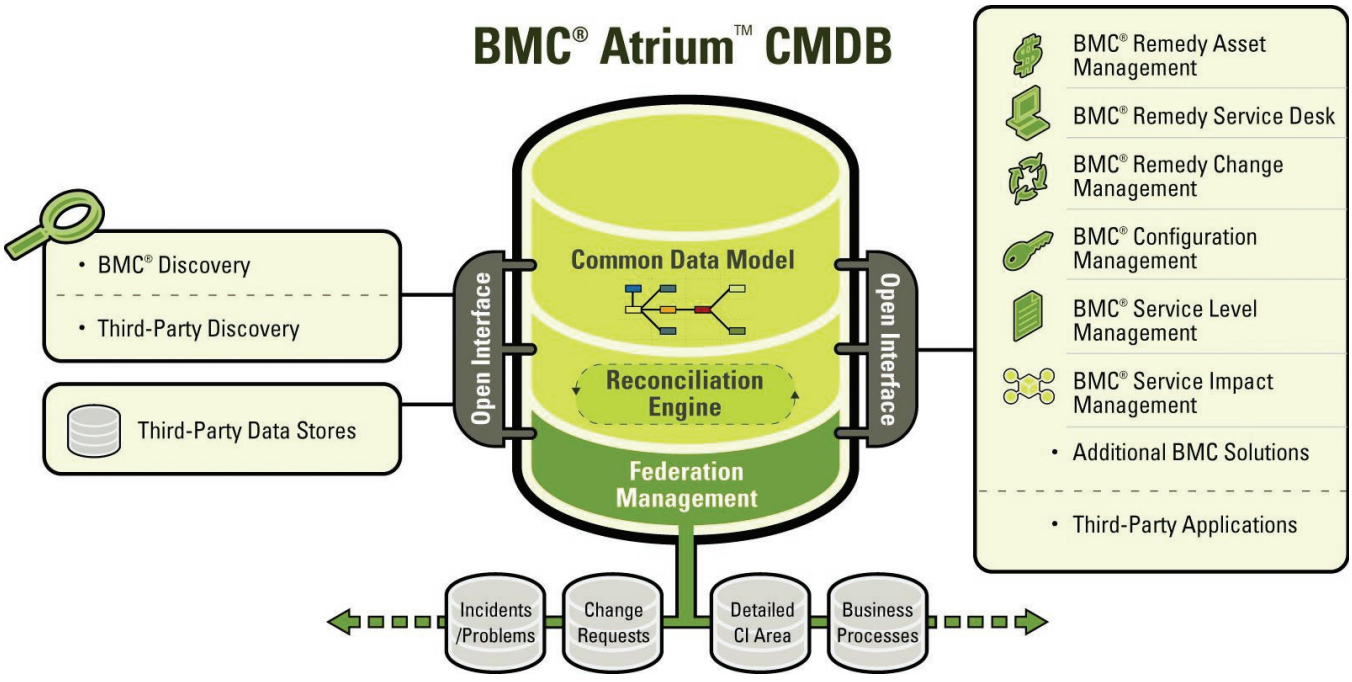
IT Domain:

Application Management	X
Database Management	X
Network Management	X
Storage Management	X
System Management	X
Security	X
Other (explain)	

Target customers:

Enterprise	90%
Mid-tier	0%
SMB	0%
Service Provider	10%
Others (explain): Managed Service Providers	0%

Product diagram:



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Market Focus and Standards

Best Practices

COBIT	X
ITIL	X
Six Sigma	X
Other:	

Standards

CIM	X
DCML	
SNMP	X
SOAP	X
WSDM	X
XML	X
Other: (i.e., OASIS, SMAL, SOA, TCP, Web Services, etc.)	WS-MAN

IT Service Management Support

Availability Management	X
Capacity Management	X
Continuity Management	X
IT Financial Management	X
Service Level Management	X
Security Management	X
Change Management	X
Configuration Management	X
Incident Management	X
Problem Management	X
Release Management	X
Service Desk	X

Vendor Services Offered

ITIL Consulting	X
Strategic Planning and Initial Assessments	X
Development	X
Implementation	X
Systems Integration	X
Other	

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Product Summary

The BMC® Atrium™ Configuration Management Database (CMDB) is an intelligent data repository that provides a working model of your enterprise IT infrastructure. Implementing an IT management strategy, supported by the BMC Atrium CMDB, will allow you to gain the IT control needed to support your organization's business goals. By consolidating disparate datasets within an organization, the BMC Atrium CMDB provides a single source of truth for your IT environment. This ensures a consistent approach to maintaining IT processes, such as incident, problem, change, configuration, asset, and service impact management. These types of applications — combined with a centralized CMDB — provide the best practice process structure and control specified by key industry standards, such as the IT Infrastructure Library (ITIL®).

The BMC Atrium CMDB provides a Common Data Model (CDM) based on industry the standards, such as Distributed Management Task Force (DMTF) Common Information Model (CIM) and Managed Object Format (MOF). This means that your IT configuration data will not only be managed within a single environment, but that you will be conforming to a set of best practices that will support future growth across IT. The BMC Atrium CMDB includes a patent-pending Reconciliation Engine to ensure you have a single consolidated view across your environment. Finally, rather than requiring the migration of large amounts of data — and imposing the requirements of maintaining a monolithic data repository — the BMC Atrium CMDB provides a single, logical, and federated data store that can reside on multiple data sources throughout your IT.

To ensure that you achieve the optimal value quickly —and get up and running quickly with our integrated solutions — BMC provides a seamless implementation experience for the BMC Atrium CMDB by automatically installing it with a number of out-of-the-box BMC

products, including BMC® Remedy® Service Desk, BMC® Remedy® Change Management, BMC® Remedy® Asset Management, and BMC® Service Impact Manager.

On the other hand, if you want to implement the BMC Atrium CMDB independent of BMC applications, you can take advantage of its many capabilities through the BMC® Atrium™ CMDB Enterprise Manager, a standalone version of the BMC Atrium CMDB. Regardless of which approach your organization takes, you will benefit from a comprehensive set of CMDB functionality.

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Structural Analysis: Concept and Design

This graphic shows the evolution of the IT market as seen by EMA.

Configuration Items

(i.e., network, system, etc.) What type of input and data is gathered and included in the CMDB?

BMC Atrium CMDB is focused on gathering and relating data across technology (desktops, servers, networks, NOC, storage), business processes (BPEL, Web Services, BPML), and people (roles, access rights, permissions). It is the combination of these three elements that make up the informational model needed by IT processes that leverage configuration data for making accurate and concise decisions.

CMDB population

(i.e., agent-based or agentless, WMI, SNMP, etc.) This includes discovery and relationship building. How is the data (CIs) brought into the CMDB and what types of relationships are associated with them?

A key part of BMC Atrium CMDB is BMC Automated Discovery, which leverages both agent-less and agent-based technologies to capture detailed configuration data, complex system and application relationship maps, and the connection between IT components and the users that leverage them. In addition, BMC Discovery also supports the discovery of mainframes, batch processes, business processes, and storage devices and automatically populates and maintains this data within the BMC Atrium CMDB.

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CI Logical Relationships

(i.e., parent/child) What specific types of CI modeling (per ITIL) is supported by the vendor?

BMC Atrium CMDB's Common Data Model is based on DMTF's Common Information Model (CIM) and leverages a number of key relationship types as the basis for connecting IT elements together. This includes parent/child relationships, federated data relationships, impact relationships, and dependencies relationships. These relationship types are used to create a complete and accurate view of an IT environment, with capabilities to support virtualized environments, SOA, and well as other complex technology architectures.

Data Schema

(i.e., CIM) What standards are supported specifically around the schema? Please also provide a brief characterization of the schema provided out of the box, their extensibility, and the amount of customization available.

The BMC Atrium CMDB Data Model is based on both ITIL and CIM, providing and industry standards approach to how data is stored, accessed, and reported on. In addition to the core data model, BMC Atrium CMDB provides a graphical management tool to extend or customize the data model without the need for programming. While BMC recommends customers follow a standards based approach to their CMDB (hence leveraging the out of the box Common Data Model) BMC Atrium CMDB supports an unlimited ability to add new categories of CIs, new CI attributes, as well as new relationships between CI categories.

CMDB Maintenance

What tools and capabilities does the CMDB have for creating, modifying and updating CMDB?

BMC Atrium CMDB leverages BMC Automated Discovery tools to help populate and maintain CI. However, customers can use any existing 3rd party discovery tool or repository to populate configuration data within the CMDB. In addition, manual entries for CI changes can be made and reconciled with the CMDB production data set. BMC Atrium CMDB manages changes to CI and relationship data through a business rules-managed reconciliation process that combines multiple data sources together and manages how and when data is merged with the CMDB.

Management Data Repository

(i.e., Oracle, Sybase, etc.) What databases are provided and supported? If the database is custom-built, please comment on scalability, failover support, etc.

BMC Atrium CMDB is platform agnostic, and supports multiple versions of popular databases including: Oracle, MS SQL Server, Sybase, Informix, and DB2. Customers can leverage database scalability and failover technologies or can also use scalability capabilities inherent in the CMDB architecture, supporting multiple servers, load balances, hot backups, and web server farms as needed.

Federation

To what degree is the CMDB federate or monolithic? Is it designed for use with other vendor's CMDB?

BMC Atirum CMDB supports a federated model that stores core CI data within the CMDB itself, with all related data (incidents, changes, SLAs, etc) and detailed data (OS settings, registry, software usage, etc) remaining in their existing repositories and accessed from the CMDB when needed. This ensures the CMDB remains scalable and maintainable over time. BMC's federated approach supports access to any 3rd party application or database by configuring a federated link through the CMDB's product registry. This includes the ability to link with other CMDB technologies.

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Open Access

How is data made available to other management tools?

BMC Atrium CMDB provides both a CI browser (to quickly search for any CI within the CMDB) as well as a CI Relationship Viewer that can be launched by any management tool to graphically show CIs, their relationships, and their links to federated data stored outside of the CMDB.

Integration

(i.e., XML, CIM, etc.) How is data integrated from other management sources?

BMC Atrium CMDB provides open APIs, an Enterprise Integration Engine, and Web Services interfaces that allow management tools to create, search, and modify CI data in the CMDB. The Enterprise Integration Engine supports data transformation and includes mapping technologies to link the CMDB Common Data Model with any external data repository. In addition, it allows rules to be created for how and when data gets moved to the CMDB (scheduled, event driven, etc).

Remediation and Reconciliation

How is data from multiple sources reconciled?

BMC Atrium CMDB includes a Reconciliation Engine, which leverages business rules to determine how to reconcile multiple data sources with the CMDB production data. The Reconciliation Engine include activities to **identify** if multiple sources are talking about the same CI, **compare** two data sources to determine deltas, and merge which determines how to **merge** data sets, which attributes win over others, and how to normalize data across multiple sources.

Performance and Scalability

(i.e., how many CIs can be supported) Unique performance and scalability strengths.

BMC Atrium CMDB has been tested to support over 20 million CI's and attributes within the core data model. The CMDB allows supports the ability to scale data across data sets, stored old configurations, archives, audits, and reporting data on different servers across an enterprise. This ensures that the production CMDB data set can be searched and accessed by IT management tools in only a matter of seconds.

Security

How is access control and identity management handled?

BMC Atrium CMDB provides a comprehensive role and access model, which allows customers to determine who has access rights to CI and relationship data stored within the CMDB. Permissions for this data can be set for categories or CI's or can even get down to the individual attributes that make up a particular CI. This ensures data is only accessed by authorized users. Additional support for high levels of encryption, SSO, link to LDAP or Active Directory is also available as part of the CMDB.

Analytic Capabilities

What analytics are targeted by the CMDB and supported out of the box?

BMC Atrium CMDB supports ad-hoc analysis and reporting within the system. This allows you to build searches and reports across business services, CI categories, related data, etc. In addition, BMC provides BMC Analytics, which provides advanced analytic and analysis capabilities, drill down, and graphical report creation.

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Automated Actions

Please comment on any policy-based automation features.

Reconciliation Engine support policy based rules for how and when data from external discovery sources gets reconciled with the CMDB production data set. These rules allow the system to understand if changes to external data are a result of approved or unapproved changes. Approved changes can automatically get moved to production while unplanned changes can get held for analysis, with automatic notifications or tickets being created within a change system, service desk, etc. This ensures that the CMDB production data set represents what you expect your environment to look like.

BMC Atrium CMDB also supports automatic audit capabilities and drift tracking of configuration and relationship data within the CMDB.

Information Conveyance

(i.e., reports, roles, types of IT and business users supported in GUIs and reports)

BMC Atrium CMDB has been designed to support multiple roles and types of users, since there are many different management tools that ultimately use the CMDB. Roles can be defined within the CMDB, providing different groups of users with different views and access into configuration data. In addition, reports can be defined that are role specific, giving a particular group of users' access to information that is pertinent to them.

Alignment with Business Services

Business services targeted by the CMDB.

The core of the BMC Atrium CMDB data model is the ability to store business service data and create a service model that graphically shows a service model and all the CI's and relationships that make up a service. This is a key requirement in delivering BSM, ensuring that IT management and process tools are making IT decisions based on an understanding of how IT supports business goals. The service model view is available for use by any BMC or non-BMC application through the CI Relationship Viewer that is part of the CMDB.

Features

Distinguishing Features

1. Reconciliation Engine - patent-pending technology that uses configurable business rules to merge data from both BMC and third-party discovery tools into a single, reliable dataset, eliminating data overlap, gaps, and conflicts between multiple discovery tools and your existing CMDB data. This is critical for today's IT organizations that rely on multiple sources of information, from either discovered data or data from other applications, such as HR or ERP systems. The ability to capture this data from various sources and reconcile it into a controlled dataset allows for the interaction and collaboration among various automation and discovery tools — and guarantees that all IT processes are acting on unified and accurate data.

2. Federation – BMC provides a federated CMDB that allows related and detailed CI data to be stored in external repositories. To access this federated data, BMC Atrium CMDB include a product registry that allows external tools to tell the CMDB how to access their data by providing URLs, Web Services, or other parameters the CMDB needs to pass to the system. To link to federated data, any IT Management tool can leverage the CI Relationship Viewer, which gives users a graphical view of CIs and their relationships. By simply right clicking on any CI, links to federated data instantly appear and can be launched directly from the viewer.

3. Data Sets – BMC Atrium CMDB supports multiple types of data sets that are required to successfully maintain a CMDB environment. While customers can create an unlimited number of data sets, out of the box BMC Atrium CMDB includes data sets for: production, reconciliation, manual entry, sandbox (future state), and archive. These data sets are a key component to helping determine when the production CMDB data set will be updated, as well as help customers plan future configuration changes that may need to occur in their environments.

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4. Common Data Model - unifies the representation of configuration data and handles all types of Configuration Items (CI). These CIs include information about the IT infrastructure, such as computer systems, applications, relationships, and topology, as well as other types of information, such as people, services, and business processes. The CMDB Atrium CMDB Common Data Model also conforms to industry standards and is based on the Common Information Model (CIM) from the Distributed Management Task Force (DMTF). This provides a uniform and standards-based approach to managing CI relationships.
5. Open Interfaces - By providing a graphical mapping interface and open API and web services interfaces, the BMC Atrium CMDB opens up the BSM ecosystem to any business processes and tools supporting your IT environment. This openness allows customers to continue to leverage the investments they have made in IT discovery and management applications. Using the BMC® Remedy® Enterprise Integration Engine, you can graphically link your tools to work within the BMC Atrium CMDB environment. These capabilities eliminate the need to replace the existing tools that make up your current IT environment. Instead, the BMC Atrium CMDB can be linked with your current IT tools and allow you to continue to gain all the advantages its technology provides.

Future Directions

BMC continues to believe that the value of the CMDB comes from the applications and processes that leverage it as a single source of truth about IT configurations and relationships. As such, BMC will continue to enhance the integrations and seamlessness between the CMDB and our customers IT management tools, regardless of whether they from BMC or a 3rd party vendor. This will ensure that customers do not need to rip and replace existing investments they already made in technology tools.

To support this strategy, BMC will continue to enhance our federation capabilities, looking at how to leverage capabilities such as SSO and SOA to provide end users with a single view and interface across configuration data as they move from one federated data source to another. In addition, BMC will continue to enhance our automated discovery and application mapping technologies to focus on building and maintaining a complete model of the IT infrastructure, including data from business processes and spanning to the underlying infrastructure and people that help support those processes.

Operations

Operating systems supported:

Microsoft Windows

Sun Solaris

HP-UX

AIX

Linux

Pricing/Maintenance:

Pricing Model: BMC Atrium CMDB is included as an embedded technology with BMC solutions. BMC Atrium CMDB Enterprise Manager is BMC's stand alone version of BMC Atrium CMDB.

List Price: NA

Maintenance Fee Costs: Varies on support level

Maintenance Agreement Levels: Varies

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CMDB released in 2005.

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About BMC

BMC Software helps IT organizations drive greater business value through better management of technology. Our industry-leading Business Service Management solutions ensure that everything IT does is prioritized according to business impact, so IT can proactively address business requirements to lower costs, drive revenue, and mitigate risk. BMC solutions share BMC Atrium™ technologies to enable IT to manage across the complexity of diverse systems and processes — from mainframe to distributed, databases to applications, service to security. Founded in 1980, BMC Software has offices worldwide and fiscal 2005 revenues of more than $1.46 billion. BMC Software. Activate your business with the power of IT.

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About Enterprise Management Associates, Inc.

Enterprise Management Associates is an advisory and research firm providing market insight to solution providers and technology guidance to Fortune 1000 companies. The EMA team is composed of industry respected analysts who deliver strategic awareness about computing and communications infrastructure. Coupling this team of experts with an ever-expanding knowledge repository gives EMA clients an unparalleled advantage against their competition. The firm has published hundreds of articles and books on technology management topics and is frequently requested to share their observations at management forums worldwide.

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