

EMA Radar™ for Application Discovery and Dependency Mapping (ADDM): Q4 2010 Summary and HP Vendor Profile

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Executive Summary

This ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) Radar™ Report reviews seven providers of Application Discovery and Dependency Mapping (ADDM) solutions and their products. It compares their ability to deliver application and/or service dependency maps across the heterogeneous hardware and software ecosystems underlying today's business applications.

ADDM solutions automate the process of mapping transactions and applications to underlying infrastructure and application interdependencies.

ADDM solutions automate the process of mapping transactions and applications to underlying infrastructure and application interdependencies. They leverage a wide variety of discovery and analysis techniques to create service models in a more or less automated fashion (depending on the vendor and product). The level of automation depends on the capabilities of the product and the “secret sauce” analytics delivered by the vendor. While automated service modeling was long considered to be the unattainable “nirvana” that every IT organization was seeking, the intent of this report is to demonstrate that these capabilities now exist and are delivering significant value within a broad range of companies and project initiatives.

The service models created by these products become invaluable tools supporting virtually every aspect of IT Business Service Management (BSM), data center management and application support. They also build a strong foundation for IT Service Management (ITSM), supporting the tactical disciplines within Service Support and the more strategic Service Delivery processes.

In terms of “real-world” IT, these products are being used to support Data Center moves and Configuration Management System (CMS) implementations. They also reduce the time required to diagnose application performance and availability problems and the risks involved in Change and Release Management.

Introduction and Methodology

In completing this Radar Report, EMA worked extensively with seven leading vendors whose ADDM products are very different in multiple aspects. EMA views these vendors, which include ASG, HP, IBM, ManageEngine, OpTier, Service-now.com and VMware, as being among the vanguard of Independent Software Vendors (ISVs) with the most production-ready offerings in this space. Participants were, in a sense, self-selecting. The opportunity to participate was offered to twenty-two vendors, many of whom declined to participate. Reasons varied, but were largely related to market focus, timing issues, and/or bandwidth. Although this product family is far from mature, the seven who did participate can be viewed as those most confident that their solutions are production-ready as defined by EMA criteria.

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On the EMA side, the entire process was a cross-functional collaboration between the BSM and application management leads. ADDM is fundamental to both disciplines, and for this reason required expert guidance and analysis from both sides.

Each vendor completed a comprehensive questionnaire consisting of nearly 100 questions and over 500 data points. The survey questions covered the five key functions common to all EMA Radar Reports, which include Architecture, Functionality, Deployment & Administration, Vendor Strength, and Cost Advantage.

EMA also conducted lengthy interviews and demos with each vendor to clarify product capabilities and vendor direction. Finally, EMA conducted more than ten interviews with customers using the products. While all vendors provided some level of access to their customers (access ranged from one to three customers), availability of reference customers was viewed favorably in assessing and validating vendor portfolios.

Once the entire process was complete, EMA analysts and an executive review board analyzed the results to arrive at final scoring. Every effort has been made to ensure that vendor positioning is represented honestly and clearly, and that the final report provides a balanced and fair set of insights regarding each vendor's strengths and limitations.

EMA has produced a report targeted at presenting and explaining Radar Reports in general, entitled *How to Use the EMA Radar Report*,¹ which is available free of charge on the EMA site, www.enterprisemanagement.com. EMA encourages readers of this paper to begin by reading that document. The goals of the Radar process are to use a combined approach to qualitatively and quantitatively evaluate providers of solutions in a particular IT management functional area, and to present their similarities and differences in a clear, graphical format. Also included in the paper is a detailed discussion of the criteria used and how each product is rated versus those criteria.

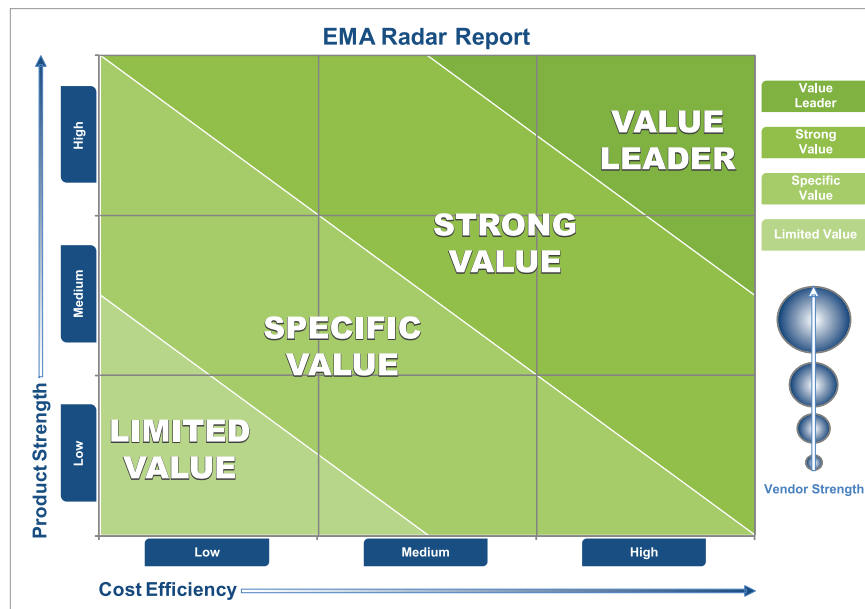


Figure 1: The EMA Radar is optimized to show how vendor solutions cluster in terms of two primary axes: Vendor Strength (architecture, integration, functionality) and Cost Efficiency (ease of administration, deployment, support & services, costs advantage)

¹ EMA Advisory Note, 2010, Available free of charge at <http://www.enterprisemanagement.com/research/asset.php?id=1715>





Figure 2: Radars for each vendor solution are included in the full report and show a five-axis contrast between the average profile and the vendor in question.

Quoting from *How to Use the EMA Radar Report*, “No analysis of this type can tell you which vendor is best for you. The data collected for an EMA Radar Report can certainly be used to make that determination, but it must be applied to the specifics of your current environment, level of maturity, and goals and priorities. Since the authors of any given Radar Report do not have your unique specifics, the Radar Report can only be a starting place and a guideline. It can inform you of the market and short-cut your process to developing a short list.”

“Ideal” and “Minimal” ADDM Capability Models

To clarify vendor placement in this report, it’s important to understand the models used to include and evaluate this very heterogeneous group of vendors. This section specifies the characteristics of both the ideal product used to evaluate all participants and the minimum criteria for inclusion in the report.

Minimum Criteria

1. Automated discovery and modeling of applications, transactions, and/or services
2. Graphical service model consisting of top-down application/transaction/service flow analysis paired with supporting bottom-up infrastructure/software/metadata relationships
3. GUI-based reporting
4. Capabilities supporting discovery and mapping of both custom and packaged applications
5. Linkages of applications to discovered artifacts via application “fingerprints” or other identifying technology
6. Support for a variety of IT and/or business roles

Ideal Criteria

1. Meets minimal criteria listed above
2. Supports both IT and business roles
3. Supported by, or can federate to, Configuration Management System (CMS) or Service Knowledge Management System (SKMS)
4. Supports “approved” and “discovered” states
5. Supports asset and inventory reconciliation and industry/security compliance-related reports

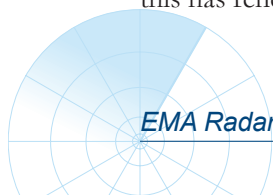
6. Has specific capabilities that simplify discovery and management of custom applications
7. Minimal manual modeling or scripting required, most functionality supported by Point/Click or Drag/Drop versus scripting
8. Policy-based reconciliation of multiple discovery sources either directly or through CMS/CMDB integration
9. Integrates with tools that support (or natively supports) ITSM functions, at minimum change and configuration management, incident and problem management, impact management, asset management and root cause analysis
10. Integrates with tools that support (or natively supports) service provisioning, automated diagnostics, pre-deployment change impact analysis, and asset/compliance or other risk-related audits
11. Supports historical analysis for optimization, capacity planning and governance, as well as near real-time performance and service impact management
12. Supports physical, virtual and Cloud environments
13. Ease of installation and maintenance, fast time to value, minimal consulting effort required for deployment
14. Priced in proportion to capabilities
15. Multiple support options, at minimum online and 24x7
16. ROI in 12 months or less
17. Scalability to support large, complex service provider environments while also supporting smaller, mid-tier environments.

Application Discovery and Dependency Mapping and its Importance in Today's Enterprise Management Landscape

“Today, it comes down to everything talks to everything. Without ADDM solutions, isolating the technology underlying a given application is like looking at stars in the sky and trying to find a constellation.” – Manager, Enterprise Application & Dependency Mapping for a global bank, interviewed as part of this report

In many respects, application discovery and dependency mapping was the ray of hope that opened the door to serious CMDB and later CMS deployments. The reason was simple: both according to ITIL and according to common sense, simply having a master list of everything in the infrastructure, and/or every application would be of exceedingly limited value. The power of the CMDB and the CMS depends on capturing interdependencies and interrelationships to support multiple IT disciplines, from change and configuration management, to asset management and infrastructure optimization, to service impact and service performance management, to security, compliance, governance, etc.

With the advent of virtualization and Cloud, the requirements for more dynamic – “run-time” if not “real-time” – insights into configuration changes and interdependencies have risen to the fore. And this has renewed an interest in “near real-time application dependency models.”



This EMA Radar Report takes a balanced look at the “configuration-centric” core application discovery and dependency market as well as the rapidly evolving real-time, performance-oriented application discovery and dependency market. It does so from both a CMDB/CMS and an application performance perspective. While no single solution fully answers both requirements, these two areas are beginning to converge somewhat through integrations and stepped up requirements for “real-time” or “run-time” awareness given virtualization and Cloud.

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ADDM technology overall is early on the adoption curve, with only about 10% of companies expressing interest in product acquisition even two years ago. That number continues to rise each year (15% a year ago) as awareness grows and as products mature. Escalating complexity – increasing abstraction in the form of composite applications, integrations, Service Oriented Architecture (SOA) and virtualization – is also driving adoption. There is also a growing realization that better information empowers IT to deliver business services with the transparency the business requires.

Although this report focuses on ADDM as a product family, the products profiled here are very different in multiple aspects. They represent a variety of capabilities, discovery methodologies and form factors, making an “apples to apples” comparison virtually impossible. What is valid, however, is a comparison of features, costs and customer value. Each reader should consider these evaluations in context to specific business objectives and associated requirements.

The products profiled can be loosely grouped into three basic types:

- *Platform or Suite products, represented by ASG, HP, IBM and VMware:* These products incorporate the ADDM-created service model and supporting metrics into a central CMS repository. The CMS then becomes the foundation for a broad array of ITSM-related tools and capabilities. The mapping process is typically accomplished with configurable, point-in-time discoveries, which may or may not be supported by triggers for automated re-discovery when applications or infrastructures change. Because of the breadth of their capabilities and relative product maturity, they most closely approximate the “ideal” capability criteria.
- *SaaS-based platforms, represented by Service-now.com:* Like the suite-based products, Service-now.com includes ADDM as part of broader ITSM functionality. SaaS solutions are less comprehensive in terms of features than the suite vendors are, tend to be broad rather than deep in terms of functionality, and are priced accordingly. They are also simpler to implement and support. Service-now.com is available in both SaaS and on-premise form factors.
- *Performance-oriented/Transaction Mapping products:* Represented here by ManageEngine’s Applications Manager and OpTier’s Business Transaction Management (BTM), such solutions target the distinctive requirements for performance-oriented application dependency mapping. They focus on automated transaction tracking in near real-time and create dependency maps via a variety of diverse technologies. In the case of OpTier, for example, mapping is done from the perspective of both data center agents and transaction “sniffing.” The resulting maps are largely self-maintaining, near real-time, and deliver a centralized “point of truth” with virtually 100% accuracy.

EMA sees ADDM as a foundational technology that can be transformational in streamlining the deployment, management and administration of IT-delivered services. ADDM reduces dependency on the human factor and tribal knowledge, ensures accuracy, and underlies the capability to minimize the risks and impact of change. EMA has discussed ADDM in multiple papers in a variety of coverage areas, but most notably in the areas of BSM, configuration management and application management. Although ADDM is foundational to each of these core areas, each practice area “sees” ADDM from a slightly different perspective.

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The notion that a single ADDM tool can support every use case is being replaced by a more pragmatic view that asset-centric requirements, change and configuration automation, and performance management will require different details, and in a very real sense, differing types of application/infrastructure interdependencies.

ADDM Implications for Business Service Management

This practice area is focused on “points of integration,” as BSM is fundamentally what EMA calls an “assimilative” architecture. This means that BSM, along with the CMDB/CMS and more advanced forms of IT Process Automation, are all about optimizing multiple types of management investments, usually across multiple brands, for the purposes of analysis, automation and visibility into the impacts of change – in all of its flavors – on IT processes and business outcomes. As a result of this assimilative design point, BSM is fundamentally a practice area defined by architecture rather than neatly packaged products.

From this perspective, ADDM plays a central role. It is the spine, if you like, around which insights into performance impact, capacity optimization, change impact, and even asset optimization and financial planning can all become better and more dynamically informed. As this technical/market/political landscape continues to evolve, this will come to mean dynamically populating a metadata system in which physical and logical relationships for services and their associated ecosystems can be dynamically brought into actionable context. Ironically, perhaps, the move to Cloud services and virtualization is actually accelerating this trend, as now interdependencies between performance and capacity issues are becoming critical do-or-die choices with direct impacts on service performance, user experience, infrastructure optimization, vendor management and change automation.

ADDM Implications for Application Management

Like BSM, application management is an “assimilative” architecture. Efficient management of applications requires a strong foundation of enterprise management capabilities that collectively underpin both real-time performance/availability and service support processes. From this perspective, the combination of CMDB/CMS and advanced automation/analytics creates the information hub enabling the delivery of quality applications at the least “cost” in terms of human resources and adverse business impact.



ADDM plays a central role in this discipline. Application management has traditionally been primarily a human-centric process. Since applications depend on so many moving parts, each of which requires unique expertise, the idea of the “war room” as the primary mechanism for root cause diagnostics is ingrained in the IT psyche. The players perform an “assimilative” function of their own by combining the collective knowledge of multiple functional areas into a hypothetical view of applications and dependencies.

From the application management perspective, the primary function of the CMDB/CMS (and/or ADDM) is to streamline this process. However, a CMDB/CMS that is not supported by automated discovery still delivers a “hypothetical” view of applications and their execution dependencies. ADDM introduces a level of trust that discovered information is no longer hypothetical, but real. Indeed, virtually every IT organization leveraging automated discovery reports that initial discoveries uncover assets and dependencies they weren’t aware of.

By discovering interdependencies between and among applications and underlying systems, ADDM products deliver a point-in-time view of the “truth.” This can be a powerful enabler that, over time, can minimize or eliminate the hundreds of man-hours IT organizations expend on the information assimilation function. These products also provide a basis for ever-higher levels of automated problem-resolution over time, and will likely, in the end, be a foundation for the autonomic systems of the future.

Although the CMS/ITSM concept is certainly core to application management, ADDM also has relevance as a stand-alone technology that may not directly relate to a comprehensive configuration management initiative. In fact, several customers interviewed as part of this report indicated that ADDM products were put in place as tactical tools supporting data center moves, with incorporation of discovered models into the CMS part of future strategic planning.

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Scoring Criteria for ADDM Products

In all EMA Radar Reports, EMA evaluates solutions based on five key areas represented by the five sides of a hexagram within the Radar. They include Deployment & Administration, Cost Advantage, Architecture & Integration, Functionality, and Vendor Strength. The last category, perhaps the only one that’s not self-explanatory, is focused on the market and industry presence, vision and financial stability of the vendor.

For each of the five evaluation areas, EMA created a “superset” of capabilities spanning the known solutions in the marketplace, added questions about new and emerging areas (e.g., virtualization and Cloud), and balanced the result with standard comparators used across all EMA Radar Report projects. The evaluation model used for this ADDM Radar Report is presented as Figure 3. The following section details each evaluation area, along with its scope and rating priorities.



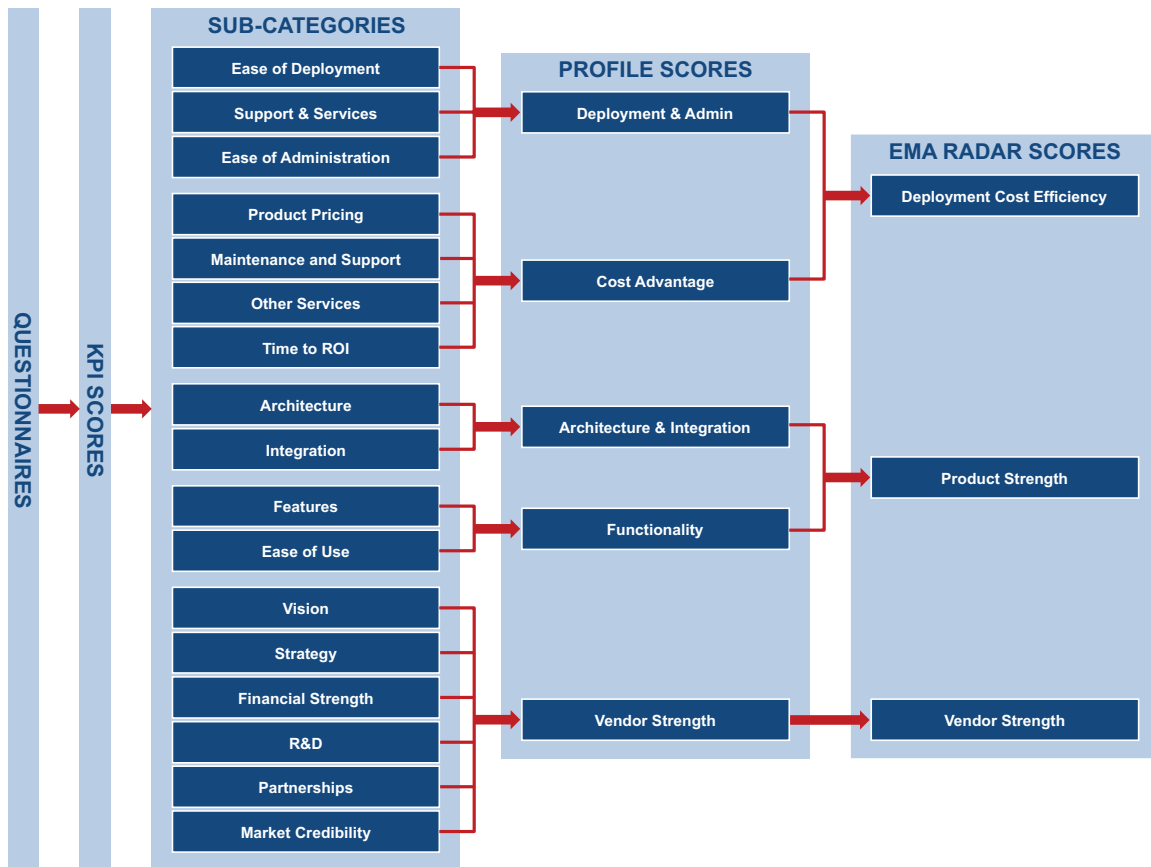


Figure 3: Assessment model for Application Discovery and Dependency Mapping

Deployment Cost Efficiency

This is the first set of measures within the EMA Radar Report framework and one of the two major axes of the Radar distribution diagram. It consists of two major sub-sections: Deployment & Administration and Cost Advantage. Each of these, along with the breakout capabilities assessed for each, is described below.

Deployment & Administration

Deploying and administering is the first step in the overall process, and the first side of the hexagram. These scores include measures that indicate how easy or difficult it is to deploy a given ADDM solution into the production environment, as well as initial time to value. The sub-areas assessed include:

Ease of Deployment

These measurements assess the resources required to initially deploy the product. High marks went to fast time-to-value, vendor provided “quick start” aids (such as templates), minimal consulting requirements, and support for a variety of databases and database vendors. Simplified packaging such as a SaaS version also won points.

- Overall process: Specific questions addressed the vendor’s process for product deployment, the number and types of discoveries necessary to deliver initial value, integration capabilities with existing tools and repositories, and credentials required.



- Time to deploy: Vendors were asked to gauge their answers for the remainder of the assessment within the parameters of “a company with 10,000 employees in support of five key critical business applications.” They were also asked to describe the five applications and the deployment environment. Within this context, this section assessed total estimated time to full deployment and total consulting hours.
- Packaging requirements and options: These questions assessed the operating environment and available form factors (since SaaS-based products are obviously easier to deploy than on-premise solutions). Vendors were asked whether a database is included or required as an add-on, and which databases are supported.
- Special features: This section gave vendors an opportunity to list any differentiating features that accelerate deployment time and associated time to value

Support and Services

This section addresses the quality of the vendor’s support and consulting services. High marks went to vendors with multiple levels of customer support. Professional services versatility in terms of support for a wide variety of services engagements was also important.

- Customer support: Questions assessed levels of customer support and guaranteed response times. They also assessed vendor-supported self-help capabilities, such as online forums and user groups.
- Professional services: Vendors were asked to describe the professional services resources available for implementation, strategic planning, and a variety of specialized consulting engagements. Engagement types included:
 - CMDB
 - Configuration and change management
 - Asset management audits
 - Security audits
 - Lifecycle application planning.

Ease of Administration

This is an assessment of the tools provided for discovery administration and the human resources necessary for ongoing administration and maintenance. High marks went to highly automated tools for discovery tasks and policy creation, as well as broad and deep support for related tasks such as security setup and closed-loop configuration management.

- Discovery administration technologies: This section assessed levels of automation supporting discovery setups, policy creation, and entry of supporting domain expertise such as passwords and technology specifications.
- Administration technologies for other automated tasks: Questions assessed how automated tasks and policies are entered into the system. Options included scripting, text, mouse clicks, drag-and-drop, and templates, and higher marks went to vendors with multiple methods of entry and automated methods such as mouse clicks versus scripting.
- CI administration technologies: This section assessed how well the product supports the requirement to ensure consistency of CIs between the discovery tool and an existing CMS. For example, semantics can be a problem when the same CI is defined within the CMS with one name, and “discovered” under a different name. The leading vendors in this space perform reconciliation as part of the data load.

- **Human resources required:** This section assesses the number of Full Time Equivalent (FTEs) required to support the product during and after initial setup.

Cost Advantage

Cost Advantage is the second side of the hexagram, and assesses factors not covered in earlier sections contributing to ongoing cost. Examples include product pricing, support and maintenance contracts, and add-on services.

Product Pricing

This includes the cost of the product itself, plus any hardware or software dependencies, including OS-related dependencies. It also assesses vendor pricing structures, such as enterprise or usage-based pricing. This measurement was one of the most difficult to quantify, because many large vendors, particularly suite vendors, are reluctant to publicly reveal pricing. EMA gathered this information from anecdotal evidence from vendor customers over time and from published industry sources, as well as from the vendors themselves.

Maintenance and Support

This section quantifies maintenance fees for the vendor's highest support level as a percentage of product price.

Other Services

This section gathers information about any add-on fees, including CMS, Change Management, or Security tools integration.

Time to ROI

This is an important measure because related EMA research indicates that today's IT organizations expect to see 100% ROI in less than 12 months. Whether this expectation is realistic or not is another discussion; however, ROI is considered to be a valid indicator by virtually every IT organization.

Product Strength

The second major axis of the Radar distribution diagram is Product Strength. This category is comprised of two sub-areas, Architecture & Integration, and Functionality.

Architecture & Integration

The first of the two major product strength categories is Architecture & Integration. It is the third side of the hexagram, and assesses the enabling technology underlying the ADDM functionality.

Architecture

Understanding product architecture is one effective measurement of a product's capabilities. It provides an understanding of the scope and breadth of discovery capabilities and of a product's potential for integration with other solutions.

- **Discovery technologies:** Discoveries can be done in a variety of ways but typically relies upon agentless methodologies, agent-based discovery, or a mix of the two. Agentless methodologies range from simple ICMP (pings) and Simple Network Management Protocol (SNMP) to flow-based analytics and code analysis. The types of discovery technologies underlying an ADDM solution determine the depth and breadth of overall discovery capabilities. As a rule, agentless discovery tends to be broad and shallow, while agent-based technologies are focused and deep. This study assessed both.



- **Discovery breadth:** This section surveyed the product's ability to discover a variety of specific technologies such as mainframes, virtual environments and security vulnerabilities.
- **Data modeling – breadth and flexibility:** The thrust of this section is to determine the types of relationships that the product is capable of modeling. For example, some products can manage application-to-application dependencies as well as application-to-infrastructure dependencies, and some cannot. Specific questions addressed the modeling of Configuration Items (CIs, or discovery artifacts) in context to CMDB integrations, both out of the box and with third-party product integrations.
- **Scalability:** Scalability is a key consideration, particularly for rapidly growing companies and large enterprises. Questions in this section addressed both theoretical scaling and the size of the largest actual deployment.

Integration/Interoperability

Virtually every IT organization has a variety of enterprise management solutions and, sooner or later, will need to integrate. This section assesses the ability of the product to integrate with other products within the vendor portfolio, as well as with third-party solutions.

- **Integration technologies:** Questions assess capabilities for data synchronization, reconciliation and normalization across multiple systems and data stores. They also address the time required for these processes and the degree of product interoperability in terms of standards support and Application Program Interface (API) tools.
- **CMDB integration and staging:** Federation is the name of the game, as many system, network and application management solutions have data stores whose value is enhanced when combined with other relevant data. This section assesses vendor-supported and third-party integrations. Integration assessments encompass product types such as Service Desk, Application Performance and LDAP, among others. This section also assesses CI staging capabilities in cases where CIs must be reviewed and/or approved prior to loading into a federated system.

Functionality

The second product strength category is Functionality. It is the fourth side of the hexagram, and covers product features and ease of use. Data points evaluated include:

Features:

- **States supported:** Examples include “desired,” “actual,” “planned,” and “historical.”
- **Off-the-shelf application support:** This section surveys the specific applications and middleware supported by the product, the number of packaged applications supported out of the box, and the types of application associations which can be discovered and modeled.
- **Custom application support:** Custom applications are the most common type of application in the average enterprise, and vendors do not provide “fingerprints” for custom applications out of the box. Some vendors have been better than others in devising ways to make it easier to develop fingerprints. This section assesses whether custom application support is primarily by automated methods (drag/drop, code analysis) or manual input (scripting). Highly automated solutions received top scores.
- **Automation:** This section assesses the specific automated capabilities within the product such as alarms, triggered updates, role-based access, pre-deployment validation of planned changes, etc.



- **Asset management:** For many companies, one use case for ADDM solutions will be to discover and/or validate assets. In support of asset management, this survey assesses native asset-related capabilities, as well as those enabled by third party integrations.
- **Service impact management:** Service impact management is another important use case, and the questions in this section address native and third-party support for impact management. They also quantify impact analysis reporting capabilities, such as cross-domain root cause analysis and time-based analysis.
- **Change impact analysis:** The key feature here is pre-deployment change impact assessment, and this is another key use case. As noted above, two customers interviewed for this study indicated they were using ADDM technology to assess potential impact prior to data center moves.
- **Security-related capabilities:** Security scans and audits are more leading-edge than the other functionalities described here, but only available in a small subset of ADDM solutions.

Ease of Use

Ease of use is one determinant of ongoing cost. If a product is easy to use, it will require less consulting over time, once IT specialists come “up to speed” on the use of the product. In fact, this statement was also borne out in customer interviews. Several customers mentioned they performed ongoing maintenance and modeling, and required consulting resources only for sporadic “tune ups.”

- **Reporting/Visualization technologies:** These questions assessed the number and types of out-of-the-box reports, as well as the product’s ability to support custom reports. It also assessed the tools provided in support of reporting capabilities.
- **Supported roles:** This set of questions assessed out of the box role support.

Vendor Strength

This is the fifth and final side of the hexagram, and covers the multiplicity of factors underlying overall vendor strength. Collectively, the measurements in this section determine the size of the “bubble” on the chart. These factors are meant to gauge the overall viability of an ADDM provider, as well as the quality of their vision, strategy, product execution and market voice. It consists of the following specific categories:

Vision

Vision becomes innovation, and visionary vendors create products that enable customers to adapt to changing technologies and application architectures over time. For this assessment, vendors were required to outline their ADDM vision in 500 words or less. More visionary vendors received higher marks.

Strategy

Strategy enables vendors to achieve their vision. Again, vendors were asked to describe their longer-term strategy for advancing ADDM capabilities.

Financial Strength

For publicly owned companies, financial strength is fairly simple to gauge based on quarterly earnings reports and other publicly available financials. For private vendors, financial strength does require a degree of faith that revenue reporting is accurate where available. For private vendors who refuse to disclose financials, financial strength can be difficult to quantify without intimate knowledge of performance gleaned from executive briefings and from customers. In every case, EMA relied on all available information for this measure.



R&D

This was supported by a question in which vendors disclosed R&D spending quantified at 1 of 7 levels: not disclosed, up to 5%, 6 to 10%, 11-15%, 16-20%, 21-29%, or 30%+. Predictably, the larger vendors were more reluctant to disclose these numbers, while some of the smaller vendors came in at the high end of the R&D spending continuum.

Partnerships

Partnerships are important for a variety of reasons, not the least of which is because they enable vendors to partner versus build or acquire – and still provide full-featured products to customers. This assessment again relied on a 500-word or less summary of each vendor's approach to partnering and third-party integration enablement.

Market Credibility

Market credibility information was gathered from customer interviews as well as from the analyst's familiarity with the vendor. Each vendor was asked to provide up to three customer interviews. EMA conducted interviews anonymously, since most companies today are prohibited by their legal departments from publicly divulging vendor partnerships.



EMA Radar Map for Application Discovery and Dependency Mapping

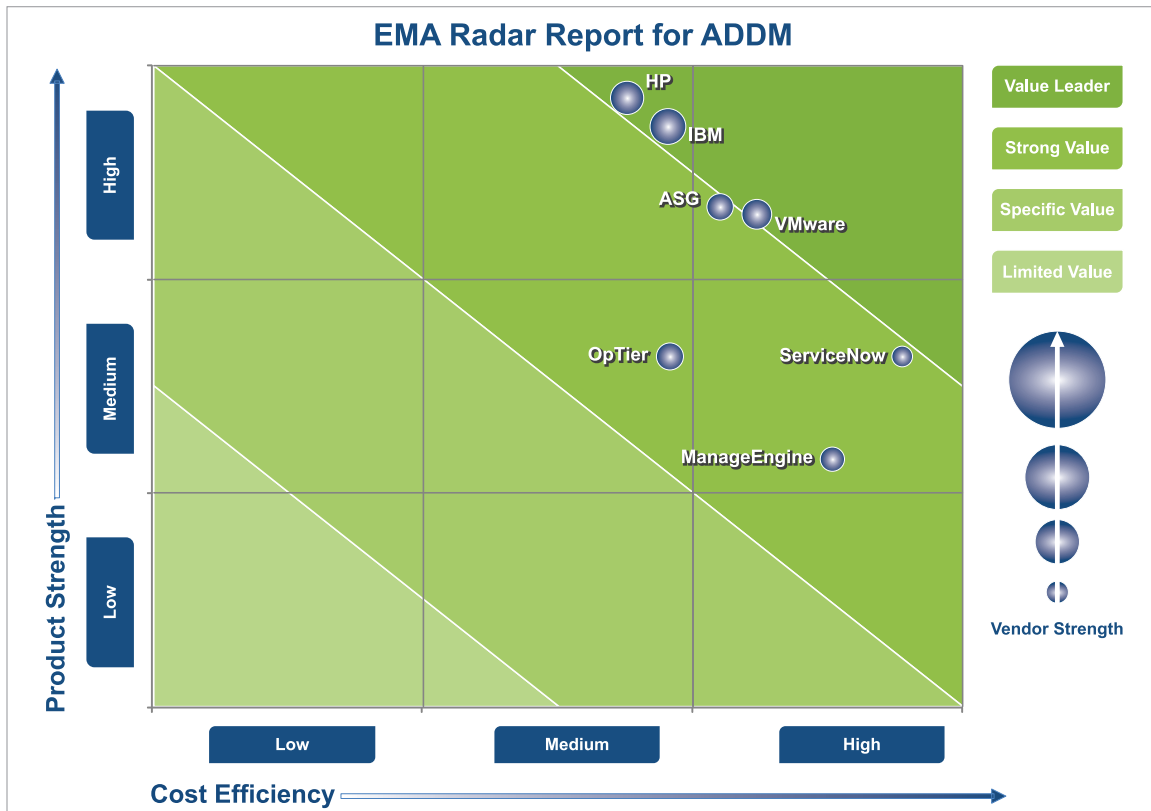


Figure 4: EMA Radar Map for ADDM

Vendors and Products Profiled in this Report

- ASG: *ASG-Discovery and Dependency Mapping (ASG-DDM)*
- HP: *HP Discovery and Dependency Mapping software (HP DDMA)*
- IBM: *IBM Tivoli® Application Dependency Discovery Manager (TADDM)*
- ManageEngine, division of Zoho: *ManageEngine Applications Manager*
- OpTier: *OpTier BTM*
- Service-now.com: *Service-now Discovery*
- VMware: *VMware vCenter Application Discovery Manager (ADDM)*

The ADDM Radar Bubble chart shown in Figure 4 summarizes the relative rankings of the seven solutions profiled for this report. Scores are plotted against Cost Efficiency (“x” axis) and Product Strength (“y” axis). The size of the “bubble” represents relative measures of Vendor Strength.

Scores on the “x” axis reflect Cost Efficiency, which EMA considers to be a measure of overall value. Products high on this axis tend to be less expensive, with features commensurate with cost.



The “y” axis reflects the vendor’s coverage of the specific functionality assessed – in this case, discovery and dependency mapping. The survey behind these findings was configuration management-centric. Vendors less strong in terms of a broad range of configuration management-related capabilities scored less well on this dimension.

All of the vendors in this assessment scored as “Strong Value” or better. This indicates that all exceeded rigorous EMA scoring criteria. The lack of results in the lower left “Limited Value” category reflects the phenomenon of “self selection.” Vendors not prepared to invest the resources required to traverse the Radar process, those daunted by the rigor of the survey and dialogue, and those less certain of product strength declined to participate.

General Findings

It is not surprising that more scalable and fully featured solutions tend to be more expensive. It is also no surprise that services costs are higher for such solutions, since adding features typically means that more individual products must be installed to reach full functionality. The leading products and vendors – those in the “Value Leader” quadrant – have, as a group, traditionally been associated with high product and maintenance costs as much as with feature richness.

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HP and IBM were top scorers in this quadrant, and both are closing the pricing gap. These vendors are investing heavily in accelerating time-to-value with templates, user self-help, quick start techniques, and product packaging aimed at simplifying product deployments and upgrades. Over the past year, IBM has also announced token-based pricing for some products, which improves cost efficiency. This combination of factors could move IBM, in particular, farther to the right (toward better Cost Efficiency) over time.

Conversely, it is not surprising to see vendors with SaaS-based products leading in the Cost Efficiency category. SaaS products tend to be broader and less deep than on-premise solutions, but they can represent an excellent value for many companies. Service-now.com addresses the need to “go deeper” by combining on-premise and SaaS deployment models with a “Mid Server” installed on site. This server gathers metrics inside the firewall, and then securely ships them into the “Cloud” for analysis and reporting. This, in effect, provides the best of both worlds (convenience of SaaS, plus the depth of on-premise).

It is also interesting to note that while OpTier and Service-now.com are very different products, they have relatively equal positions on the “y” (Functionality) axis. Alone of all the vendors, OpTier’s focus from the beginning has been *deep* versus broad. OpTier has almost entirely automated the process of top-down transaction modeling, with the result that OpTier BTM can trace variable execution paths as they traverse the data center. In contrast, Service-now.com has developed a broad suite of products based around Service Desk with good CMDB support. The fact that the two products scored similarly in terms of “latitude” demonstrates the truth of EMA’s assertion that Radar Reports should be viewed in context with each company’s specific requirements.



ManageEngine scored best on the Cost Efficiency scale of all the “on premise” vendors, based on both overall pricing and time to achieve 100% ROI. This reflects ManageEngine’s goal to provide “80% of the functionality at 10%” of the price. VMware also scored well, in part because the solution is delivered exclusively as a self-contained virtual appliance. Appliance-based products tend to ease deployment headaches somewhat because they come pre-built. They also eliminate the need to procure computing platforms or software “piece parts,” such as databases, and reduce software installation effort as well. In terms of appliance-based solutions, we have not seen the soft appliance concept broadly applied in the ADDM space as yet. This could prove to be an interesting concept for deploying and federating ADDM models across multi-vendor Clouds, although this is in all likelihood an idea that’s still ahead of its time.

Distribution of Results

The results shown in Figure 4 illustrate a distribution of product strengths versus cost efficiencies. An initial observation is that all vendors received scores in either the Value Leader or Strong Value category. Although this may appear to show an overly rosy judgment on EMA’s part, the truth is rooted in the self-selection process described earlier.

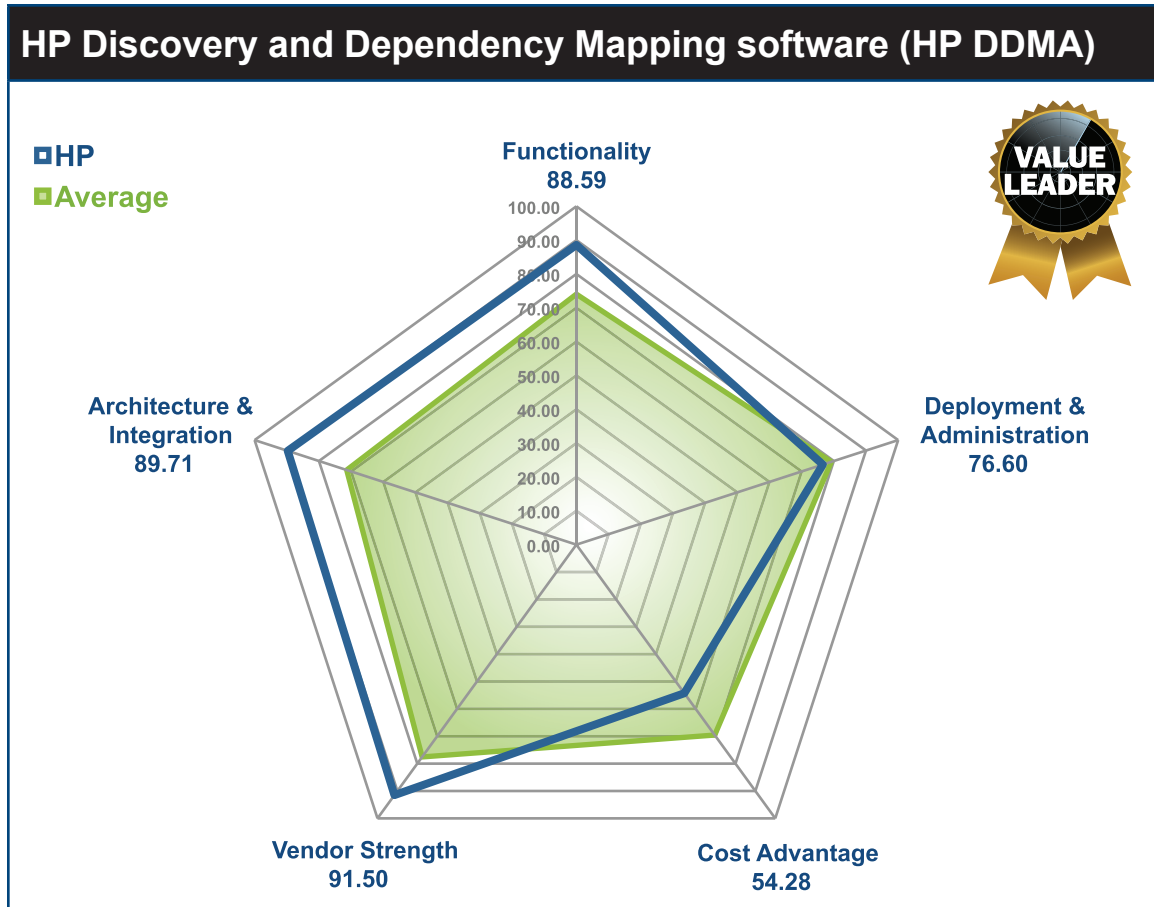
There are two clusters of note. The first is composed of the four suite products, HP, IBM, ASG and VMware. These are highly functional, high-end products with a configuration management-centric approach, which was a central focus for this research. Each of these solutions also has application performance and availability functionality that relates directly to classic ADDM capabilities.

The second cluster is composed of three very diverse products, OpTier, Service-now.com and ManageEngine. They are linked in this study by virtue of the fact that all create a Service Model of sorts based on capture of application (or transaction) to infrastructure interdependencies. The interesting thing here is that the differences among these products may be more notable than their similarities. In many respects, they can be viewed as complementary versus competitive solutions, and are optimized for very different purposes.

OpTier is focused on transaction performance, while Service-now.com centers on a consolidated Service Desk. They are, in effect, opposite sides of the same coin. This was driven home in an interview with an OpTier customer, whose company is running OpTier in a complementary fashion with BMC’s Tideway. Although Tideway is not reviewed in this report, it provides a core set of classic ADDM capabilities as well. The OpTier customer did static mapping every day with Tideway to establish an ADDM baseline, and then supplemented the Tideway service model with the dynamic model delivered by OpTier. The combination painted a dimensional picture of applications in context to transactions, and one which is always up-to-date in terms of change. This “combination” approach – merging static and dynamic discovery – is one likely roadmap for this family of products over time.

ManageEngine is also a “different animal” from others in this cluster. It focuses more on application performance than Service-now.com, and is specifically designed for the value market. ManageEngine’s ADDM and modeling capabilities support this performance-oriented focus. They also support the vendor’s Asset Manager asset management solution, which is delivered as either a SaaS or an installed solution.





Introduction

For this EMA Radar on ADDM, EMA evaluated HP Discovery and Dependency Mapping Advanced Edition (DDMA) software. This product was, in effect, “best of show” in the sense of being the most complete in its technology coverage. As the product summary chart shows, HP scored above the norm on three axes: Functionality, Vendor Strength, and Architecture/Integration.

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HP has multiple features that are well thought-out and executed. The product has built-in support, for example, for mainframe and storage discovery at reasonably granular levels, and covers a particularly wide variety of virtualization products. HP’s Universal Configuration Management Database (UCMDB) is packaged with DDMA and has a built-in reconciliation engine that reconciles Configuration Items (CIs) across discovered, integrated and federated data. This ensures data integrity across federated systems, regardless of the data source. Another valuable feature is a “Probability of Failure analysis,” designed to help gauge the risk of adverse impact from a proposed change.



Another noteworthy value-add mentioned favorably by both of the HP customers interviewed for this report is HP's strong DDMA community. HP, clients and partners build and share discovery content, and HP conducts weekly calls in which community members discuss DDMA-related topics with each other and with HP experts. HP also has a program to extend DDMA functionality to support a wider range of environments and requirements through this program, and while the challenges of managing this process are manifold, HP seems to be well up to the task.

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HP also has excellent virtualization support and includes coverage of XEN, VMware, Hyper V and IBM P-Series, among others. For VMware, HP also supports automatic updates of virtualized topologies caused by changes and moves (vMotions).

Architecture and Integration

In terms of Architecture and Integration, HP scored particularly well in the areas of discovery and modeling breadth, integration, and CMDB integration and staging. HP has built its products around the UCMDDB hub, with DDMA as the discovery engine feeding data into UCMDDB. In doing this, HP has paid considerable attention to reconciliation of multiple data sources, extending the lifetime of third-party products while adding depth and breadth to the DDMA process.

Functionality

Functionality is another area in which HP excels, with top marks in the service modeling, off-the-shelf application support, asset management, service impact management and security categories. In terms of service modeling, HP is distinctive in supporting not just the actual (as discovered) state, but future, historical, authorized and managed states as well. HP was also a high scorer in the ease of use category, with solid reporting capabilities and high scores for supporting a wide range of roles and functions.

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Deployment and Administration

Three of the suite vendors (ASG, HP, and IBM) achieved remarkably similar scores on this measurement. That being said, HP did excel in terms of “special features” designed to accelerate time to value, with wizards, “self configuring” software, templates, self help, best practices, a weekly community call, and other capabilities. HP's professional services also scored well, achieving the highest possible score.

Cost Advantage

Factors comprising this score include product pricing, maintenance and support costs, other services costs, and time to achieve ROI. HP was roughly equal to most of the other suite vendors in these measurements, though all were more expensive in general than the SaaS vendors. In this, as in most cases, you get what you pay for, and price is generally commensurate with capability.



Vendor Strength

This measure is comprised of a combination of vision, strategy, financial strength, R&D, partnerships and market credibility. As a publicly owned company, HP's financial strength is relatively transparent, and the company has continued to prosper in spite of the economic problems across all world economies in recent years. HP's market credibility is second only to IBM's (the two were separated by only .5 of a point on our assessment) and HP has put strong partnerships in place as well.

Strengths and Limitations

The strengths of HP Discovery and Dependency Mapping (DDMA) include:

18. UCMDB (packaged with DDMA) is among the industry-leading Configuration Management Systems, and acts as the foundation and integration hub supporting Application and Business Service Management, among other service-related processes.
19. HP's community is a no-cost "value add" providing access to the "best of the best" in terms of engineering support, community-created "fingerprints" and a central knowledge repository, as well as extending product functionality.
20. Strong CMS support, with best coverage of all vendors for CI "States."
21. Functionally rich, as opposed to inexpensive, solution.

The limitations of HP Discovery and Dependency Mapping (DDMA) include:

22. Out of reach, cost-wise, for most smaller companies.
23. Initial deployment and modeling effort is significant.
24. Complexity often goes with functional richness, but typically requires more ongoing, administrative overhead.

Customer Quotes

"One of the biggest drivers for us in purchasing HP was because competitors struggled in some areas – like virtualization and load balancing. We are using the product to do data center consolidation, and when it comes to consolidating more than one application on each server, physical to physical doesn't mean anything anymore."

"We brought HP in for the initial implementation and now bring them in periodically for system health-checks. Otherwise, our team does the ongoing mappings of new applications."

"We really like HP's DDMA Community. HP conducts weekly calls where users worldwide can meet with HP engineers. We tackle the really complex discovery and mapping issues on those calls."

"One of the biggest drivers for us in purchasing HP was because competitors struggled in some areas – like virtualization and load balancing. We are using the product to do data center consolidation, and when it comes to consolidating more than one application on each server, physical to physical doesn't mean anything anymore."



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