

Enter the CMDB

By Ken Klapproth, Entuity

When it comes to technology, many people don't know shoe polish from Shinola. This can certainly be said of most business users of the technology used to deliver their services and applications -- nor should they. Today's emphasis in IT is to ensure quality service delivery to the business end user in a reliable manner, and to make it simple. The challenge for IT organizations is that the collection of services and technologies required for these simple business solutions are anything but. They have longed for an end-to-end management solution for monitoring and evolving their IT infrastructure -- from network gear, servers and workstations to databases, applications and beyond -- to enable and support these business services. The benefits of having a 'single pane of glass' for management are obvious, in terms of hard economic and soft knowledge gains.

However, the chances of achieving such a horizontally and vertically integrated management solution have always been slim. Impeded by proprietary application databases with closed schemas and the enormous cost of the custom coding needed to share and manipulate the data, only the very largest of companies could even attempt to create an end-to-end solution. Even 'framework vendors,' most of whom built their frameworks through acquisition, have fallen short of the task.

Answers on the Horizon

But miracle of miracles -- it looks as though this particular holy grail may now be within reach. Enter the Configuration Management Database (CMDB), a construct put forward by the Information Technology Infrastructure Library (ITIL). CMDB is seen by many as the latest and best hope for integrating the disparate management applications needed by today's IT organizations.

The concept is simple: create a logically central place in which all of the management systems can place their data,

document the structure and access methods for that data, and serve it to them in a manner appropriate and sufficient for their needs. It doesn't need to be a single database -- not a truly practical option. Instead it can be a federated architecture where the most adept source for particular actionable information becomes the trusted provider. If all of the various management application vendors supported and adhered to such a concept, then the integration effort would be trivial in comparison to previous possible solutions.

Integration: The Big Picture

Approaches to IT management have taken a variety of forms over the years. Today's focus on end-to-end IT service management needs a business service orientation and a level of integration not offered by any single management tool. CMDB promises to support that orientation, and has been gaining acceptance as a viable mechanism to achieve the ITIL goal of a central and trusted data source to support IT service management.

Whether considered as a technology to aggregate management information or as a process enabler for service delivery and management, the CMDB gives users the versatility that helps solve many IT issues.

The CMDB offers a mechanism for various management systems to share information and provide a holistic view of the company's IT. It contains information about the different components -- or configured items -- of the organization's IT infrastructure, and the relationships between them. The CMDB is sufficiently flexible to contain both system- and human-generated information, but typically contains details required for acceptable configuration management.

However, the CMDB is not just a monolithic database from one application. In fact, the most effective implementations employ a federated approach to gather salient information details from various applications. The CMDB col-

lates and organizes data, enabling the user to view it from any perspective, and providing a vital stream of information about the performance of the company's IT at any time. For example, it integrates information from disparate systems such as network, configuration, or application management tools, to demonstrate the status of each of these systems and how they are running, both individually and in relation to each other.

In addition to providing an integrated view of IT systems, CMDB is also a convenient mechanism to combine best-in-class solutions in order to address end-to-end business needs. By viewing the CMDB as a methodology rather than as a result, worlds of possibilities are achievable beyond the traditional aggregation of data.

Learning to Share

Through the standards-based approach of CMDB, the output of one application can be easily configured to drive another application without the need for extensive coding and custom integrations. In this way, the CMDB offers organizations the ability to combine already-productive individual applications to help solve broader business initiatives including: change management, security, IT governance, infrastructure asset management, capacity management, service management, and service delivery. The CMDB provides a standard structure for sharing and integrating the data and events between the applications as necessary.

With CMDB as the integration methodology, the stand-alone applications upon which companies rely can contribute to a broader end-to-end solution for business services management (BSM). These quick-to-deploy solutions each have a depth of functionality beyond that of the larger framework applications, but lack the breadth to solve the wider BSM problem. Using the standards-based approach of

the CMDB, smaller applications would be "connection ready," and offer dramatically-reduced connection times and integration costs. Companies would not only receive the benefit of the more functional individual applications, but also faster time-to-value and less implementation costs of deploying broader solutions. The CMDB provides the connectivity to solve business problems across IT disciplines and deliver IT best practices.

It may also be the mechanism that will finally achieve the goal of multiple management systems collectively providing integrated IT service management. Most will agree that the CMDB, although gaining support across the industry, is in its early stages of evolution - and even earlier stages of implementation. Initial implementations of a CMDB have been horizontally-focused, usually in the areas of help desk, trouble-ticketing and configuration, or asset management. These applications are well served by integration, since tasks -- and, therefore, supporting data -- flow from one to another. In this scenario, when a user reports a problem to the help desk, the IT staff looks up the user's laptop configuration and determines that it is invalid. They then open a ticket to have a valid configuration re-installed according to system and security policy, and perform the update, after which the change is noted in the asset management system.

With examples like this one, organizations are beginning to understand more about the CMDB and the impact it can have on their day-to-day operations. As the different management tools that feed into a CMDB evolve to monitor more parts and layers of the IT infrastructure in a proactive and ongoing basis, the CMDB will be able to provide more valuable and insightful data to the IT department. After all, it can only be as good as the information it receives. Better information means better business decisions -- and that's no Shinola.

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