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E-Guide

Data warehouse software bundles: tips and tricks

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Contents

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analytics within many organizations and is enabling
companies to take advantage of data warehousing
technologies that other might have been beyond their reach.
But limitations exist, and depending on an organization's
goals and available resources, appliances may or may not be
the right option. In this E-Guide, readers will gain expert
advice around whether data warehouse appliances are the
right option for their organizations.*

Data warehouse hardware software bundles: benefits vs. limitations

By: Lyndsay Wise, Contributor

The emergence of data warehouse appliances has broadened the potential
uses of business intelligence (BI) and analytics within many organizations
and is enabling companies to take advantage of data warehousing
technologies that otherwise might have been beyond their reach. But
limitations exist, and depending on an organization's goals and available
resources, appliances may or may not be the right option.

Traditional data warehouse systems and appliances that bundle together
data warehouse hardware and software in a single package provide many of
the same potential benefits to companies. Whichever approach they choose,
organizations use data warehouses to consolidate data from multiple source
systems, manage data quality and integration processes, and support BI and
analytics capabilities that enable business users to gain insight from the data.

In many cases, when businesses look at implementing a data warehouse
appliance, they're seeking to expand an existing warehousing infrastructure
with the goal of boosting performance, adding more storage capacity or
enabling new types of analytics. Other organizations look to data warehouse

Contents

appliances as a gateway to BI and analytics due to their perceived ease of implementation in comparison with traditional data warehousing.

The two technologies are similar in structure, but the traditional approach involves separate data warehouse hardware and software with in-house developers responsible for the design and development of the data warehouse architecture. With appliances, vendors provide a server (or set of servers) with optimized data warehouse software and the warehousing structure already in place.

When looking at which approach to choose, smaller businesses or companies looking to provide analytics capabilities to a specific department or business unit are flocking to appliances because of their deployment advantages. And with "big data" analytics becoming a priority for many organizations, appliances are being used to consolidate large amounts of information as an extension of traditional data warehouses. As both vendors and user organizations focus more on appliances, the packaged systems likely will play an even bigger part in data warehousing and BI initiatives going forward.

Understanding the potential benefits of data warehouse appliances can help organizations identify whether they're the right fit to address business requirements and issues. For example, for businesses that are trying to solve targeted issues such as gaining better insights into customer data for marketing uses or looking at ways to improve customer satisfaction, the ability to quickly deploy a data warehouse appliance and manage it separately from an existing data warehouse could provide value that might be more difficult to achieve by expanding the current infrastructure to support such uses.

Taking the full measure of data warehouse appliances
But even though appliances can address many business needs, there are situations in which organizations might choose not to adopt them in lieu of a traditional data warehouse. For organizations with mature data warehousing and BI environments, looking toward appliances as an additional component to use in expanding their infrastructures might not be feasible for financial or

> SearchBusinessAnalytics

Contents

technical reasons. And not all organizations are poised to take advantage of more advanced data warehousing technology, such as columnar databases and in-memory analytics, that many appliances support.

The truth is that in addition to their potential benefits, data warehouse appliances do have some limitations to keep in mind when considering whether or not they make sense for an organization. For example, although some appliance vendors provide a variety of server choices for hosting their data warehouse software, most limit their offerings to one or two hardware options.

Also, despite the perceived ease of use in comparison with building and managing traditional data warehouses, organizations might require new skill sets to install and maintain appliances. That could mean hiring new workers, which might put the long-term cost of an appliance deployment out of reach despite the lower pricing structure for the technology itself. It's also important to assess the ability to expand the available storage space in appliances and issues that might affect overall performance as workloads increase. (The same can be said of traditional data warehouse systems, of course.)

With so much attention being focused on data warehouse appliances these days, it's easy to get caught up in all of the hype surrounding them. But taking full stock of the potential pluses and minuses of appliances is essential in helping organizations to decide whether the data warehouse hardware and software bundles are the right choice for them.

Lyndsay Wise is president and founder of WiseAnalytics, an independent analyst firm and consultancy based in Toronto that focuses on business intelligence and dashboards for small and midsized organizations.

SearchBusinessAnalytics

Contents

Do Business Intelligence tools require a data warehouse

By: William McKnight, President at McKnight Consulting Group

We're a growing company and we're going to invest in business intelligence (BI) tools in the near future. Some people on my team say this means we're also going to need a data warehouse. How do we know if we really need one?

Business intelligence (BI) tools do a great job accessing relational databases. In the old days, much of a corporation's data was locked in proprietary or homegrown applications that BI tools could not access directly, which required you to extract the data into a relational database that was often a data warehouse. Currently, much -- if not most -- of a company's operational systems use relational databases, enabling BI to access that data directly. There is a lot of talk about operational BI today, which is when people directly access those operational systems with their BI tools. In those cases a data warehouse is not needed.

But that assumes the ONLY reason people built data warehouses was because their operational data needed to be in a relational format. That simply is not the case.

Data warehousing is not a disease to avoid. It often enables business analysis (performance management and reporting) for business people. This is accomplished by performing the data integration and data cleansing necessary to provide business data that is consistent, correct, current and comprehensive.

Why is this data integration necessary? Too often, data is spread across many applications with different definitions and reference data. This reference data, often referred to as master data management (MDM) or dimensional data (in data warehouse-speak), includes product, customer, employee and other organizational structure data that is not readily available for real-time queries without a data warehouse. In addition, being able to have historical data available for trending and year-over-year analysis is generally best supported by a data warehouse.

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Contents

It is more than likely that you need a data warehouse and it is best if you plan for one right away. If you fail to plan and build one then you will probably build a series of data silos to support each new set of reporting requirements that you have. This accidental architecture will hurt your business by limiting its visibility into data it needs to operate and grow. It will hurt your IT group, too, because it will be far more costly to create and maintain this haphazard array of data silos than if you were to build the data warehouse from the beginning.

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Contents

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