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# 5 Factors to Consider When Selecting a Relational Database

SAP Sybase ASE Hits the Mark

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In recent years, IT executives have been bombarded with an increasing number of requests from business users, other IT staff, and technology vendors to support new data classes and related information management technologies. The previously static world of information management has been disrupted, because there are more kinds of data than ever before. Enterprises are overwhelmed by transactional relational data, plus new types of data such as tweets, videos, text messages, and RFID scans. And all of this means that companies have to store much more data than in the past.

Despite this changing landscape, a relational database management system (RDBMS) remains at the core of an enterprise's information management portfolio and, therefore, it is more important than ever to select an RDBMS wisely. To make the best choice for your organization, you need to consider each offering's reliability, adaptability, scalability, predictability, and manageability.

Let's look at these factors in detail, and touch on an RDBMS that receives high marks in each category: SAP Sybase Adaptive Server Enterprise (SAP Sybase ASE).

## Factor #1: Reliability

As an integral part of an IT landscape, an RDBMS must be reliable. Reliability refers to the ease of securing and safeguarding data so that critical applications can proceed with normal operations. In some cases, reliability is fostered through techniques that protect data on a single server; in other cases, by replicating data onto multiple servers. Regardless of the specific server topography, an

RDBMS must encompass multiple overlapping tactics to encourage reliability, and thus become a trustworthy foundation for all data usage scenarios.

## Factor #2: Adaptability

Since there are now so many diverse workloads, enterprises must frequently support traditional online transaction processing (OLTP) on the same hardware that supports business intelligence operations. The exact blend of these responsibilities is extremely variable, since it is difficult to forecast the precise trajectory of any enterprise's information management needs. Therefore, an RDBMS must be able to adapt to rapidly changing assignments without imposing costly hardware upgrades or new purchases.

## Factor #3: Scalability

Internal users and external customers have come to expect a near-instantaneous response from technology, and they don't readily distinguish between local and remote information assets. For example, users assume that they will be able to retrieve data delivered over the internet as quickly as data hosted on their own computer.

Given that an RDBMS underpins most enterprise applications, any sluggishness at this layer will inevitably bubble up and disrupt the rest of the information-processing environment. A scalable RDBMS will be able to support ever-growing quantities of users, data, and transactions without requiring new hardware costs. Some of the best methods for increasing scalability include data compression, in-memory processing, database virtualization, and exploiting the power of multi-processor servers.



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## Revitalizing Your Database Selection Criteria

Many enterprises have decades of experience procuring relational database technology, but too many rely on outdated guidelines when selecting new solutions. This is an issue because:

- An RDBMS is just one piece of the information management pie, so it must coexist with other mission-critical software.
- There are now more options for new data management solutions, such as on-premise, cloud-based, and hybrid offerings.
- Budgetary constraints are tighter than in the past, since everyone is being asked to do more with less.
- The database must support significantly larger numbers of users as well as bigger data volumes.

Choosing an RDBMS is not a decision to be made lightly. Enterprises should revitalize their guidelines, using the five criteria discussed in this article.

### Factor #4: Predictability

IT organizations are routinely held accountable to strict service-level agreements (SLA) by customers, internal line-of-business leaders, and, in some cases, regulatory agencies. For IT to meet these rigorous SLAs, each piece of the underlying infrastructure must be capable of achieving its own robust SLA. For an RDBMS to deliver predictable service levels, it must deploy quickly without the need for overhead, such as complicated installation procedures or extensive training; support vacillating workloads by time of day and year; and easily scale when confronted with expanding demand based on number of users, data volumes, and transactional load.

### Factor #5: Manageability

When selecting an RDBMS, many organizations do not factor in the long-term total cost of ownership, which can lead to unfortunate surprises and unnecessary extra expenditures. These added financial burdens detract from IT's capacity to deliver innovative solutions that support the business. After accounting for different software licensing models and their related costs, staffing expenditures are highly variable across major RDBMS platforms. To help keep administrative personnel costs low, IT executives should look for an RDBMS that involves streamlined installation, automated tuning and error correction, intuitive tooling, and minimal training requirements.

## For Your Consideration: SAP Sybase ASE

For more than 25 years, SAP Sybase ASE has been a widely adopted database platform for high-performance, mission-critical applications. It continues to put innovation to work for its users by leveraging in-memory databases, advanced compression capabilities, virtualization, and administrative optimizations.

Since acquiring Sybase in 2010, SAP has made major investments in SAP Sybase ASE to continue its tradition of technology advancement. Plus, SAP Sybase ASE is the optimal price-performance transactional database for SAP Real-Time Data Platform. SAP Real-Time Data Platform is a unified data management framework that lets you process, analyze, and deliver complete and accurate information at any speed to any application or user located anywhere.

Historically, SAP Sybase ASE has been popular in some of the most demanding environments, such as finance, government, and health care. Yet among those enterprises that have not yet evaluated SAP Sybase ASE, there's a perception that it's a "specialized" database. This is a misconception, given that SAP Sybase ASE has 30,000 customers across all industries, largely because the solution meets the five criteria for selecting an RDBMS.

SAP Sybase ASE provides **reliability** by safeguarding your data, so critical business applications can run smoothly; **adaptability** by adjusting to and optimizing changing workloads and user demands; **scalability** that makes more efficient use of your existing resources to support ever-increasing users, transactions, and information volume; **predictability** to ensure SLAs are met; and **manageability** with a database that is easier to administer and requires fewer resources to manage.

### Learn More

While database landscapes are more varied than ever, an RDBMS remains at the core of an enterprise and it is critical that companies select one wisely. With its history of success, and a bright future as part of SAP's information management technology, SAP Sybase ASE merits inclusion on an enterprise's RDBMS selection shortlist. For more information, visit [www.sap.com/ase](http://www.sap.com/ase). ■

Note: This article is derived from "Database Decision Factors" by Robert D. Schneider of WiseClouds, LLC.