SAP Solution Brief
SAP Technology | SAP Adaptive Server Enterprise

Modernize Transactional Applications with a
Scalable, High-Performance Database

SAP **Run Simple**

Gain value with faster, more efficient transactional systems

To thrive as a digital business, companies need software for processing new types of transactions at extreme scalability and with utmost confidence. SAP® Adaptive Server® Enterprise (SAP ASE) delivers scalable, cost-effective data management functionality that modernizes transaction-intensive applications with **high performance, continuous availability, and greater efficiency**.

Transactional data continues to expand at tremendously fast rates with no signs of slowing. Fueling the upsurge are new types of transactions from increasingly diverse sources – machine to machine, micropayments, distributed ledger systems, and Internet-connected devices, to name a few. And the pervasiveness of automated devices such as smartphones, store beacons, and sensors creates even more transactions. Enterprises must figure out how to ingest and process these extraordinary numbers of transactions concurrently, reliably, and quickly.

As a high-performance database platform, SAP ASE lets you dependably and affordably capture, store, and manage data generated from millions of business events occurring every minute of every day.

The technology enables you to meet the demands of a digital economy. It helps you accelerate business growth as you process millions of transactions more quickly, protect data against common threats, and increase profitability through operational efficiencies.

Gain value with faster, more efficient transactional systems

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Boost transaction processing to enable new modes of business

Extreme transaction processing is enabling numerous new business approaches. From in-app mobile phone purchases to RFID sensors triggering inventory purchases, SAP ASE gives you the scalable, high-performance transaction-processing capabilities needed to power these applications.

Innovative features free the database engine from performing input/output, network, and other potentially time-consuming activities for more predictable and consistent outcomes. To further enhance performance, you can increase the amount of data managed in main memory, improve CPU utilization, and execute query plans in parallel. Plus, the database MemScale option of SAP ASE equips applications with instant responsiveness and significantly higher throughput by

38%

More business transactions processed with SAP ASE[1]

using the latest memory architectures for reduced resource contention and faster query response times.

Processing and analyzing transactions quickly yields key benefits such as detecting fraud more quickly, finding insightful patterns in customer behavior, or delivering more personalized promotions.

Boost transaction processing to enable new modes of business

Maintain business continuity and shield data from threats

Simplify data management on premise and in the cloud
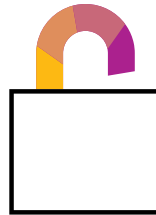
Innovate with a choice of deployment options

Maintain business continuity and shield data from threats

Data replication, encryption, and security tech-nologies are built into SAP ASE, protecting your data from unexpected disruptions and security breaches from within and outside the organization. That means you can keep your service levels con-sistent and your data secure at all times – whether in transit, when accessed, or while at rest.

To help your business meet security and privacy requirements, SAP ASE employs state-of-the-art encryption technology. Full database encryption complements column-based encryption and pro-vides a straightforward approach to protecting all information in the database without affecting existing applications or running workloads.

95%
Less unplanned downtime[2]

With the database always-on option of SAP ASE, you can run 24x7 global operations with a unified high-availability and disaster-recovery architec-ture, rolling upgrades, and automatic application failover.

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Simplify data management on premise and in the cloud

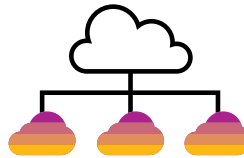Innovate with a choice of deployment options

2. "ROI Study: The Case for SAP ASE Database Solutions," IDC white paper sponsored by SAP, February 2017.

Simplify data management on premise and in the cloud

By simplifying data management, digital businesses can achieve lower costs and improved efficiencies while coping with rapid data growth, high transaction volumes, and large numbers of users. Advanced in-database compression of both structured and unstructured data allows you to store data more efficiently, which reduces storage costs. And because data retrieval is more efficient, better performance is realized.

SAP ASE enables you to analyze the potential impact of extreme workloads on software systems. Using the workload analyzer option of SAP ASE, you can capture a workload from a production system, replay it on a testing environment, and quickly analyze the impact of configuration changes on application performance.

37%
More efficient database administration[3]

As a cloud-ready solution, SAP ASE offers the flexibility to remain agile and competitive on SAP Cloud Platform, Amazon Web Services, and other cloud technologies. In addition to a wide range of options for cloud deployment, flexible licensing incorporates SAP ASE, SAP IQ software, and SAP Replication Server® in a single licensing model to meet your particular needs.

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Innovate with a choice of deployment options

To meet your specific requirements, SAP ASE can be extended with these options.

Option	Benefits
SAP HANA® accelerator for SAP® Adaptive Server® Enterprise (SAP ASE)	• Accelerate reporting capabilities of SAP ASE • Build analytical applications on the SAP HANA platform
SAP ASE, database MemScale option	• Improve the efficiency of SAP ASE in high core-count machines • Speed query execution and response times with the latest memory architecture
SAP ASE, database always-on option	• Help ensure high availability and disaster recovery in a unified architecture • Accelerate failover for planned and unplanned downtime
SAP ASE, workload analyzer option	• Diagnose problems and manage configuration changes proactively • Capture, analyze, and replay production workloads in a nondisruptive manner

SAP ASE fosters innovation by offering a variety of deployment options.

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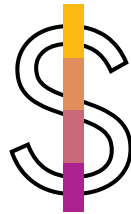
Innovate with a choice of deployment options

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Several editions of SAP ASE are also available to provide greater flexibility for deployment and use:
- **SAP Adaptive Server, platform edition** – Secure deployment flexibility by incorporating SAP ASE, SAP IQ, and SAP Replication Server in one licensing model
- **SAP ASE, enterprise edition** – Power mission-critical database management systems for a single node environment

- **SAP ASE, Edge edition, advanced version** – Enable solutions for smaller database deployments and applications with a limit of eight cores
- **SAP ASE, express edition** – Access a free download for development and deployment on limited configurations (limited to four database engines up to 50 GB)

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With SAP ASE, you get a flexible, scalable solution for your database deployments.

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Drive value with faster, more-efficient transactional systems

Essential transactional systems that drive your business must address key challenges in the areas of performance, reliability, and efficiency. Enabling greater reliability and affordability, SAP ASE captures, stores, and manages data generated from millions of business events that occur every second of every day.

SAP ASE offers proven benefits for transaction-intensive applications from SAP, our partners, and custom solutions. In fact, according to an SAP-sponsored IDC study, businesses that run applications on the SAP ASE database have realized distinct cost and performance benefits relative to other relational database management systems. These benefits include a 32% faster business-transaction response time, 36% lower five-year cost of operations, and improved quality of service due to a 95% reduction in unplanned downtime.

US$2.46 million

In higher annual revenue for organizations using SAP ASE[4]

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4. "ROI Study: The Case for SAP ASE Database Solutions," IDC white paper sponsored by SAP, February 2017.

Summary

With SAP® Adaptive Server® Enterprise (SAP ASE), you can handle massive volumes of data and thousands of concurrent users to accelerate the growth of new data-driven business applications. Drive value with a faster, more efficient transactional system that is designed to meet the demands of the digital economy.

Objectives

- Process millions of transactions quickly to accelerate business growth
- Protect customer and partner data against common threats and disasters
- Lower costs and increase profitability through operational efficiencies

Solution

- In-memory computing that reduces latency for multiuser, mission-critical applications
- Unified architecture for disaster recovery and high availability
- Simple, sophisticated administration to reduce operating costs and enable innovation

Benefits

- Achieve fast performance at extreme transaction volumes
- Deliver critical security and trusted reliability
- Improve efficiency and lower overall IT costs

Learn more

To find out more, call your SAP representative today or visit us **online**.

SAP Run Simple