Getting Started
SAP Adaptive Server Enterprise
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SAP Adaptive Server Enterprise

Getting Started with SAP Applications Using SAP Adaptive Server Enterprise

Typographic Conventions

Type Style	Description
Example	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.
Example	Emphasized words or expressions.
`EXAMPLE`	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
`Example`	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
`Example`	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example>`	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
`EXAMPLE`	Keys on the keyboard, for example, `F2` or `ENTER`.

Document History

Version	Date	Change
1.0	25-06-2012	Initial version
1.1	18-09-2012	SAP Adaptive Server Enterprise licensing options (chapter 2) New installation tool for SAP applications on SAP ASE: SAP NetWeaver 7.3 /7.3 EHP1 (chapter 4): Software Provisioning Manager 1.0 (SL Toolset 1.0 SP5) Additional chapter on migration of SAP NetWeaver BW Systems (chapter 11.2) Release-specific SAP Notes for the DBA Cockpit (chapter 8) New chapter "Online Information for SAP Applications on SAP ASE" (chapter 13)
1.2	07-12-2012	Software Provisioning Manager 1.0 (SL Toolset 1.0 SP6) For more information, refer to chapter 4 and SAP Note 1680045. New FAQ on SAP ASE 15.7 compression. See SAP Note 1750510. Chapter 6.5: Important SAP Notes for configuration Chapter 9.3: SAP Landscape Virtualization Management (LVM) is available for SAP on Sybase ASE. Best practice: Migration to SAP ASE: SAP Note 1680803
1.3	28-01-2013	HP Serviceguard Solutions for Linux (chapter 5.1)
1.4	10-04-2013	Software Provisioning Manager 1.0 (SL Toolset 1.0 SPS07): SAP Note 1758266
1.5	02-08-2013	Software Provisioning Manager 1.0 (SL Toolset 1.0 SPS08): SAP Note 1787683
1.6	11-11-2013	Software Provisioning Manager 1.0 (SL Toolset 1.0 SPS09): SAP Note 1680045
1.7	20-01-2014	Change in terminology: The term *SAP Sybase Adaptive Server Enterprise (SAP Sybase ASE)* has been replaced with *SAP Adaptive Server Enterprise (SAP ASE)*.

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1 Introduction

This document gives you an overview of the setup for database installation and administration of an SAP Adaptive Server Enterprise (SAP ASE) database that is run with the SAP system. The aim is to help you get started as quickly as possible by providing you with concise information and links to further details.

To avoid error situations or bottlenecks in the database, you need to know where to find extra information that goes beyond the scope of this documentation.

SAP ASE has been certified to run SAP Business Suite applications. In addition to providing optimizations for SAP applications delivered as part of SAP ASE 15.7, SAP is committed to SAP ASE as the go-to-platform for delivering new database optimizations and features including database administration for SAP Business Suite.

SAP ASE is the preferred database for transaction environments, especially for SAP ERP and other SAP Business Suite applications, including the SAP Solution Manager. SAP ASE is also often used for SAP NetWeaver Business Warehouse. SAP solution schedules and the database releases are synchronized through joint roadmaps, and the maintenance periods follow the supported solutions. SAP leverages the joint technical roadmap to optimally integrate SAP applications with the database and thus achieves the goal of making SAP ASE the most cost-efficient database for customers.

SAP on ASE is available for the following solutions:

Solution:	Availability:
SAP NetWeaver (incl. SAP NetWeaver Business Warehouse SAP NetWeaver Process Integration SAP Enterprise Portal)	SAP NetWeaver 7.02 and higher
SAP ERP	SAP ERP 6.0 EHP5 SAP ERP 6.0 EHP6 SAP ERP 6.0 EHP7
SAP CRM	SAP CRM 7.0 EHP1 SAP CRM 7.0 EHP2 SAP CRM 7.0 EHP3
SAP SRM	SAP SRM 7.0 EHP1 SAP SRM 7.0 EHP2 SAP SRM 7.0 EHP3
SAP SCM	SAP SCM 7.0 EHP1 SAP SCM 7.0 EHP2 SAP SCM 7.0 EHP3
SAP Solution Manager	SAP Solution Manager 7.1

For more information on released platforms, refer to the Product Availability Matrix.

Constraints:

SAP supports ASE-SMP (or ‘ASE classic’). The Sybase ASE Cluster Edition is not supported yet.

2 SAP ASE Licensing Options

SAP offers a runtime and stand-alone license for the SAP Adaptive Server Enterprise Edition.

The runtime license includes ASE options that are required for running the SAP Business Suite. The runtime license comes at an extremely favorable cost: the fee is 8% of the SAP application value (SAV).

To run SAP Business Suite applications with a stand-alone license, you need to request licenses for the same ASE options as included in the runtime license in order to stay compliant.

SAP Business Suite customers need to have a valid license for the following options:

7011761 ASE EE High Availability

7011762 ASE EE Security & Directory Services

7011764 ASE EE Encrypted Column

7011765 ASE EE Partitions

7011767 ASE EE In-Memory Databases

7011768 ASE EE Tivoli Storage Manager (TSM)

7011769 ASE EE Compression

> **Note**
>
> Stand-alone and runtime licenses for SAP Business Suite applications have different license keys.
>
> A runtime license is always limited to one SAP installation number.
>
> Disaster Recovery does not require a license; for more information on Disaster Recovery, refer to chapter 5.

3 SAP ASE Features

3.1 Compression

SAP ASE for Business Suite uses a number of compression strategies to achieve high compression ratios. This includes compression within a single row to remove empty space and zeros in fixed length columns. At page/block level, this includes both page dictionary and page index compression strategies. Repeated data items and repeated sets of data items are replaced by a single reference - resulting in dramatic savings for duplicate data.
SAP ASE for Business Suite also supports LOB compression. Given that LOBs can be very large in size (up to 2GB), compression can result in very significant space savings. FastLZ and ZLib compression techniques are supported. While the first provides lower CPU usage and execution times, the latter provides higher compression ratios.

Of course, data and LOBs are also buffered in compressed form in ASE's data cache(s), reducing the memory resources required to run SAP applications on ASE.

Default compression settings are applied to all tables during SAP installation.

Index compression is planned for one of the next releases of SAP ASE.

For more information, refer to SAP Adaptive Server Enterprise: Data Compression.

3.2 In-Row LOBs

SAP pool and cluster tables make heavy use of text (CLOB) and image (BLOB) data types. SAP ASE supports in-row LOBs for situations where LOBs are fairly small and can readily fit within the corresponding data row. This helps in reducing I/O while accessing small LOBs and also further decreases the overall database size. The in-row LOB size is freely configurable. Proper defaults are applied to all tables during SAP installation.

3.3 Data Partitioning

SAP ASE supports several data partitioning types (range, hash, list, round-robin). As for other DBMSs supported by SAP, partitioning can be selectively used to reduce contention on hot tables. In SAP BW, partitioning is used to optimize lifecycle management tasks. For more information, refer to Partitioning Types.

3.4 Task Scheduler

In contrast to most other DBMSs, ASE controls decisions regarding which user task to run in its own tasks scheduler. This provides maximum throughput by minimizing the time needed to perform user context switches

and by rendering it possible to optionally separate user workloads according to business priorities.
User tasks are organized in engine run queues, where the number of engines can be configured up to the number of processor cores or hardware threads available.
The “threaded” kernel introduced with ASE 15.7 enhances ASE scalability on systems with a very large number of processors, processor cores, and hardware threads.

For more information, refer to Running SAP Applications on Sybase's ASE Database.

3.5 Resource Configuration Limits

SAP ASE is capable of managing up to 4 TB of physical memory and up to 1024 engines. The maximum number of user connections is unlimited (2 billion), which is also true for the number of data partitions configurable.

4 Installation

The SAP ASE 15.7 package provided by SAP includes the ASE 15.7 server as well as the JDBC and ODBC drivers for database connectivity. SAP ASE 15.7 is installed silently as part of the installation of the respective SAP product. Do not install the ASE software separately prior to the SAP installation.

You normally obtain the installation media as part of the installation package from SAP. However, you can also download installation media from the Software Distribution Center on the SAP Service Marketplace using the following paths:

http://service.sap.com/swdc → Installations and Upgrades → My company's application components → <your product> → <your product version>

The SAP ASE database patches are available under:

http://service.sap.com/swdc → Support Packages and Patches → Browse our Download Catalog → Sybase Products → Sybase ASE for Business Suite → SAP Sybase ASE 15.7 for Bus. Suite → <your OS platform>

Do not download updates for the ASE server, or for the JDBC and ODBC drivers directly from Sybase or other websites!

Download ASE versions and patches with the extension "for Business Suite". Only these versions are subject to special SAP quality measures!

For more information on updating SAP ASE in the context of SAP Business Suite products, refer to SAP Note 1590719.

SAP on Sybase ASE installation guides:

Solution:	Installation Guides:
SAP ERP	http://service.sap.com/erp-ehp5-inst http://service.sap.com/erp-ehp6-inst http://service.sap.com/erp-ehp7-inst
SAP CRM	http://service.sap.com/crm-ehp1-inst http://service.sap.com/crm-ehp2-inst http://service.sap.com/crm-ehp3-inst
SAP SRM	http://service.sap.com/srm-inst
SAP SCM	SAP Service Marketplace → Installation & Upgrade Guides → SAP Business Suite Applications → SAP SCM → SAP SCM Server*
SAP Solution Manager 7.1	SAP Service Marketplace → SAP Components → SAP Solution Manager → Release 7.1
Software Logistics Toolset 1.0	SAP Service Marketplace → SAP Components → SL Toolset → Software Logistics Toolset 1.0 → Section: Documentation → Software Provisioning → Installation: Systems Based on **NW7.0/7.0 EHPs** or

Solution:	Installation Guides:
	Installation: Systems Based on **NW7.1 or Higher**

*and the following enhancement packages

Important SAP notes for the installation:

Note Number:	Title:
1554717	SYB: Planning Information for SAP on ASE
1748888	SYB: Inst. Systems Based on NW 7.3 and higher: SAP ASE
1799291	SYB: Inst. Systems Based on NW7.0 and higher: SAP ASE
1599814	SYB: Installing ESDs* for Sybase ASE 15.7 (UNIX + Linux)
1607816	SYB: Installing ESDs* for Sybase ASE 15.7 (Windows)
1729176	SYB: Changing the listener port of Sybase ASE

*ESD: Electronic Software Distribution

5 High Availability and Disaster Recovery

To make your database server highly available, you can use one of the following high availability strategies that are built into SAP ASE:

- Database High Availability/Failover: OS Level Cluster (Cold Standby)
- Database Disaster Recovery: IO System Data Replication Custom Based (Cold Standby)
- Database Disaster Recovery: Log File Shipping Custom Based (Warm Standby)

5.1 Database High Availability/Failover: OS Level Cluster (Cold Standby)

In the cold standby setup of SAP ASE, you use two database servers, a primary database server and a standby database server ("cold standby"). The database is located on a disk that is shared by the two database servers. Since the database servers share a disk, this setup is sometimes also referred to as "shared disk scenario". The cold standby setup uses operating system clustering to ensure high availability. The secondary ASE host is started when the primary host is not available. It takes over the complete database from the shared disk. The database software and configuration files can either be installed on the shared disk or on a local disk if the access path is the same on all cluster nodes. The advantage of the local software and configuration installation is that it is possible to configure ASE differently on each cluster node and to reduce database downtime in case of software maintenance. This solution requires the same hardware for the primary and secondary hosts to avoid a mismatch in the configuration of the Adaptive Server.

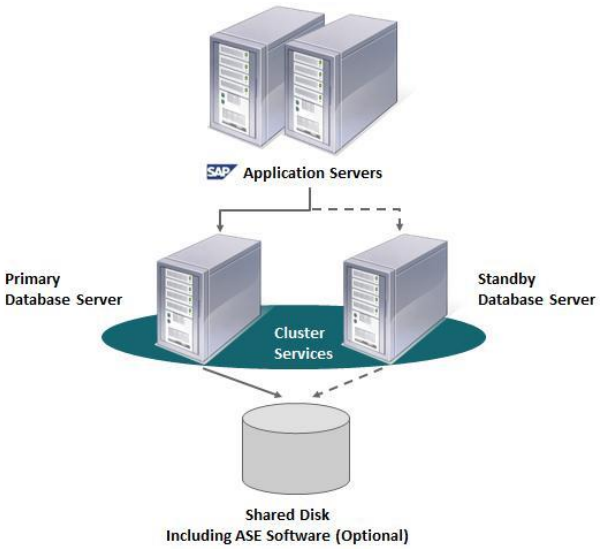

Figure 1: Database High Availability / Failover: OS Level Cluster (Cold Standby)

Challenges:

- System not available during failover and database recovery
- In-flight transactions are lost
- Risk of I/O level corruption
- Database software maintenance requires downtime

The following partner solutions support this SAP ASE HA cluster scenario:

Platform:	HA Offering:
All OS Platforms	Symantec VCS: White Paper available for each supported platform (http://eval.symantec.com/mktginfo/enterprise/white_papers/b-ha_for_sybase_db_with_vcs_hadr_WP_14179510.en-us.pdf)
Red Hat Cluster Suite	Solution based on Open Cluster (available by mid of 2012) (https://www.redhat.com/resourcelibrary/reference-architectures/Deploying-Highly-Available-SAP-Servers-using-Red-Hat-Clustering) In collaboration with Red Hat, SAP has started to develop the official integration of SAP ASE.
HP Serviceguard Solutions for HP-UX	The HP Serviceguard Extension for SAP B.05.10 on HP-UX 11iv3 supports easy-deployment, modular-style SAP NetWeaver clusters with SAP 15.7 ASE RDBMS on HP Integrity servers after installation of patch PHSS_42569 or any superseding patch since March 26th, 2012. For general information about HP's high availability clustering solutions for SAP, refer to: www.hp.com/go/sgesap For technical information, including an up-to-date support matrix, refer to the latest release note documents available from Hewlett Packard on: http://www.hp.com/go/hpux-SGeSAP-docs http://www.hp.com/go/hpux-serviceguard-docs
Microsoft	MS Cluster Solution support SAP installations for SAP ASE include HA installation options for the Microsoft Cluster environment.
SUSE Linux Cluster Solution	No support for SAP ASE 15.7 yet, but customers can add their own live check scripts for SAP ASE. In collaboration with Novel, SAP has started to develop the official integration of SAP ASE. For more information, refer to the white paper "SAP Made High-Available on SUSE Linux Enterprise Server for SAP Applications" on http://www.novell.com/sap.
HP Serviceguard Solutions for Linux	Serviceguard extension for SAP for Linux SGeSAP/LX automates and accelerates SAP application failover: HP Serviceguard Solutions for Linux

5.2 Database Disaster Recovery: IO System Data Replication Custom Based (Cold Standby)

In a data replication scenario both servers are kept in sync. In the event of a failure, the standby database server takes over the workload without any loss of data. The cold standby setup uses synchronous transfer of transaction data using the Logical Volume Manager (LVM) or storage replication.

Challenges

- System not available during failover and database recovery
- In-flight transactions are lost
- Risk of I/O level corruption despite separate disks for data storage

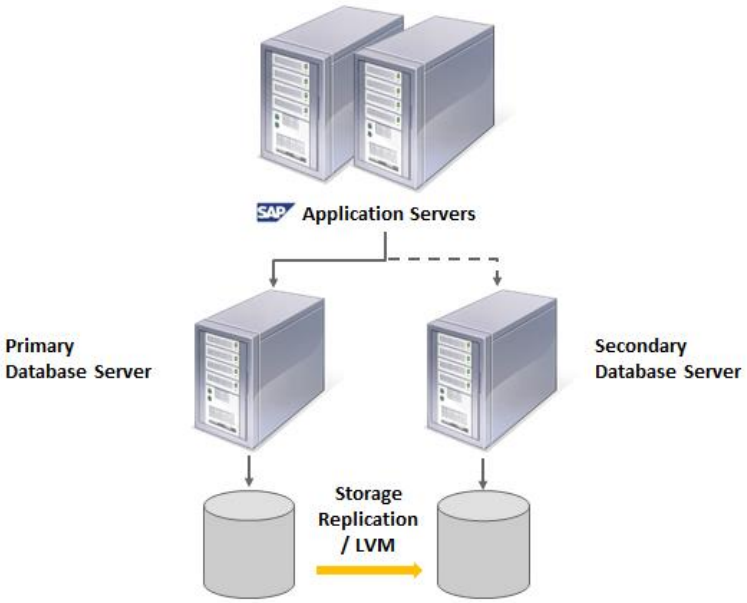

Figure 2: Database Disaster Recovery: IO System Data Replication Custom Based (Cold Standby)

5.3 Database Disaster Recovery: Log File Shipping Custom Based (Warm Standby)

In a warm standby setup database transactions are transferred asynchronously (log file shipping). The standby host works in continuous recovery mode. The warm standby solution provides the option to distribute data to distant locations. Separated disks for data storage, provide protection against IO level data corruption.

Challenges

- Data loss possible
- Most recent changes (transactions) have to be checked by end users
- Undefined downtime in case of failover

For more information, see attachment of SAP Note 1650511.

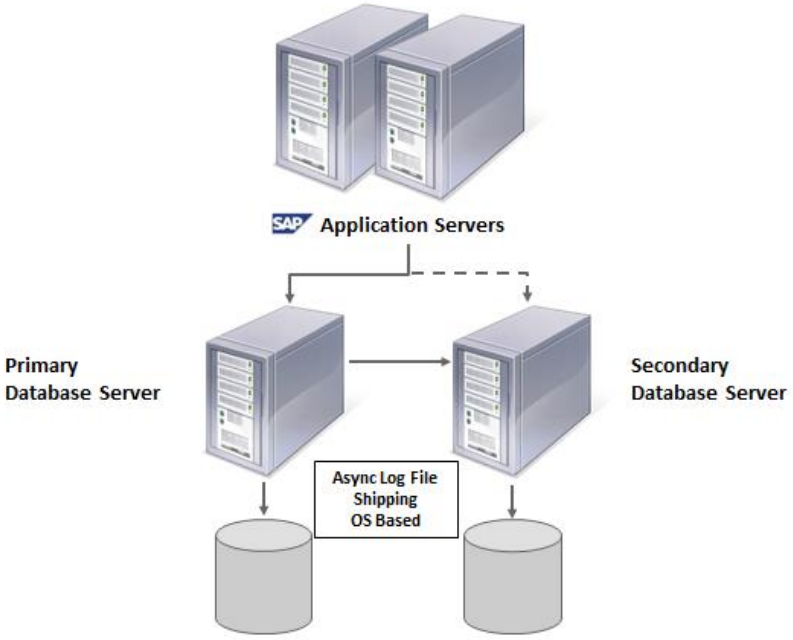

Figure 3: Log File Shipping Custom Based (Warm Standby)

Figure 4: Disaster Recovery solution using SAP ASE, the SAP Replication Server and the Disaster Recovery Agent Management utility

More information on High Availability Offerings for SAP ASE:

SAP Note 1650511: High Availability Offerings for SAP on ASE
SAP ASE and High Availability:
http://www.sybase.com/products/databasemanagement/adaptiveserverenterprise/highavailability

6 Configuration

6.1 Dynamic Configuration

Most of the configuration parameters are dynamic; there is no need to reboot the ASE server for changes to take effect. The dynamic configuration allows easy reconfiguration, even in production environments.

6.2 Configuration of Physical Memory

The total physical memory that ASE uses is limited by the max memory configuration parameter. This memory is assigned for different use cases inside the DBMS. In SAP ASE, the most important memory pools are:

- Caches for storing data and index pages
- Table, index and partition metadata caches
- Procedure cache, which is used to compile, execute, and cache query access plans
- Lock list used for row and table locks
- Memory required for user connections

6.3 Number of CPU Cores

The number of CPU cores that SAP ASE is allowed to use can be configured by the maximum number of ASE engines and the number of threads in the ASE thread pools.
For details, refer to:
http://www.sybase.com/files/White_Papers/SAP_Applications_on_Sybase_ASE_Database_WP.pdf

6.4 Alphabetical List of Configuration Parameters

For detailed information about each configuration parameter, refer to the following Info Center:
http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc31654.1570/html/sag1/sag1113.htm

6.5 Important SAP Notes for Configuration

Configure the database after the installation: SAP Note 1539125

Sizing and Tuning of Production Systems: SAP Note 1722359

7 Backup and Recovery

It is of paramount importance for your business that you define your recovery objectives and that you develop and test a backup and recovery process that meets these defined objectives. Your business depends on its ability to recreate the database of your SAP system in the case of a failure.

A full disaster recovery of an SAP ASE database system requires to recreate the ASE software installation, rebuild the ASE server and to load the SAP database into the ASE server.

The ASE software installation and the ASE database server can be recreated from external sources, while the SAP database must be recovered from a database backup. To speed up recovery it is recommended that you perform a backup not only for the SAP database, but also for the ASE server and the ASE software installation.

7.1 Backup of the SAP ASE Software Installation

Refer to your OS vendor's documentation regarding how to ensure recoverability of the OS system with all its file systems.

7.2 SAP ASE Server Backup

The ASE server stores information about databases, devices, ASE logins, and ASE server roles in the master database. It is recommended that you generate frequent backups of the master database.

7.3 Backup of Databases

The backup of the SAP ASE databases consists of two tasks:

- Backing up the database
- Backing up the transaction logs (mandatory for production databases)

7.3.1 Backing up Databases

SAP ASE provides two different means for backing up a database:

- DUMP DATABASE command and
- an external backup method

The DUMP DATABASE command is an online operation - that is, users can stay connected to the system and continue to work. Databases backed up with the DUMP DATABASE command have to be restored using the LOAD DATABASE command.

The external backup method relies on the ability to suspend write access to a database and back up a consistent copy of the database devices using an external mechanism, such as splitting off disk mirrors. The copies of the database devices can be used to recover the database using the MOUNT command.

7.3.2 Backing up the Transaction Log

For a production system it is mandatory to be able to recover the SAP database up to the latest possible point in time. This requires that the transaction log of the database is backed up with the DUMP TRANSACTION command.
To recover information in the transaction log, you must load the transaction log dumps with the LOAD TRANSACTION command.

More information:

For general recommendations regarding recoverability of SAP applications using SAP ASE, refer to

SAP Note 1585981 - SYB: Ensuring Recoverability for SAP ASE.

Information on backup and recovery of an SAP system on SAP ASE:

SAP Note 1611715 - SYB: How to restore an SAP ASE database server (Windows)

SAP Note 1618817 - SYB: How to restore an SAP ASE database server (UNIX).

Technical documentation on the backup and restore procedure of an SAP ASE system:

Sybase System Administration Guide: Volume 2, Chapters 7, 12, 13 and 14.

Technical documentation on the SAP ASE commands 'DUMP DATABASE', 'DUMP TRANSACTION', 'LOAD DATABASE', 'LOAD TRANSACTION', 'QUIESCE DATABASE', 'MOUNT':

Reference Manual: Commands

8 Operations

The monitoring and administration of an SAP ASE database can be performed in many ways.

There are native tools provided in the form of stored procedures.

"MDA" tables provide easy and direct access to monitoring data (see the Entity Relationship Diagram of the monitoring tables for SAP Adaptive Server Enterprise 15.7).

With the DBA Cockpit SAP provides a modern, browser-based and centralized monitoring and administration tool for small and large landscapes of SAP ASE systems:

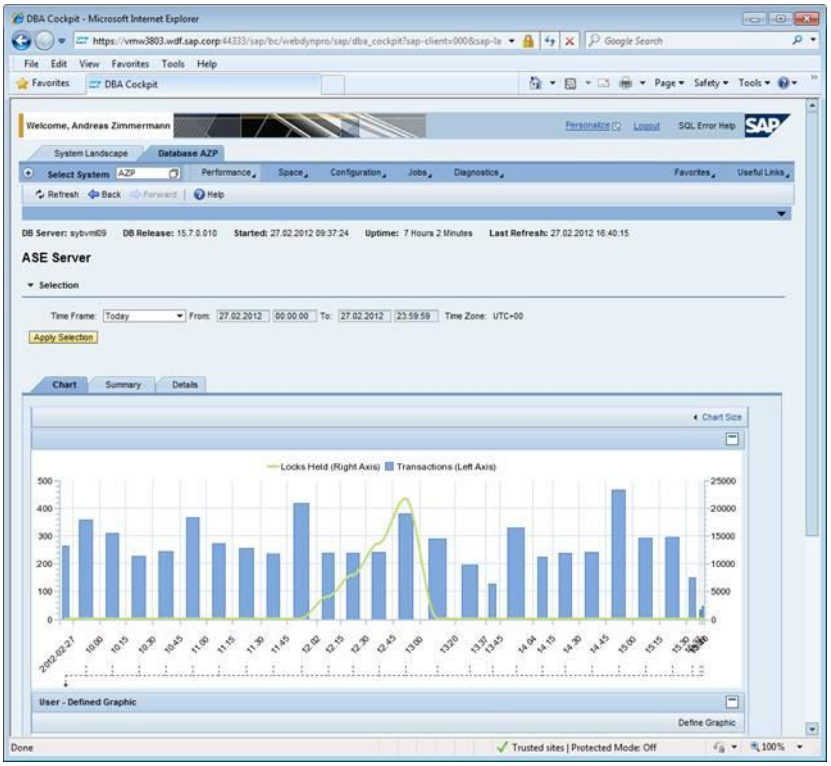

Figure 5: DBA Cockpit - SAP ASE

The DBA Cockpit is part of every SAP NetWeaver-based system. You can run the DBA Cockpit locally on an SAP NetWeaver-based system by calling transaction DBACOCKPIT. Alternatively, you can run the DBA Cockpit on your SAP Solution Manager system, where you can access all databases in your system landscape using remote connections. If you use the DBA Cockpit as part of the SAP Solution Manager system, this allows you to update and administer all databases from a central system rather than having to log on to each individual system separately.

With the SAP Solution Manager 7.1, SAP customers receive an Enterprise Management Tool, including components like alerting, Performance Warehouse, a ticketing system, and so on.

Sybase additionally provides the SAP Control Center (SCC), an application-agnostic, centralized monitoring and administration tool. It also covers other products like SAP IQ or SAP Replication Server.

Maintenance Tasks

With regard to other DBMSs, changes to the database content will necessitate maintenance of table statistics as well as the physical data store. SAP ASE provides lightweight utilities to update table statistics and to reorganize objects without any business downtime. A complete rebuild of objects is possible without business downtime.

The DBA Cockpit for SAP ASE provides a framework that allows automation of tasks like statistics update or object reorganization. Details are available at DBA Cockpit: Automatic Table Maintenance for SAP ASE.

More information:

SAP Service Marketplace → SAP NetWeaver → SAP NetWeaver <Release> → Operations → Database-Specific Guides → Database Administration Guide: SAP on Sybase ASE

The following SAP Notes provide release-specific information on the DBA Cockpit:

1757924: SYB: DBA Cockpit Release Notes 7.02 SP10, 7.30 SP5, 7.31 SP1

1757928: SYB: DBA Cockpit Release Notes 7.02 SP11, 7.30 SP6, 7.31 SP2

1758182: SYB: DBA Cockpit Release Notes 7.02 SP12, 7.30 SP8, 7.31 SP5

1758496: SYB: DBA Cockpit Release Notes 7.02 SP13, 7.30 SP9, 7.31 SP7

1814258: SYB: DBA Cockpit Release Notes 7.02 SP14, 7.30 SP10, 7.31 SP8

9 Performance

9.1 SQL Query Optimization

Query execution in SAP ASE is performed using a cost-based optimizer. Query plans are dynamically generated on the basis of available indexes, data statistics, and CPU and memory resources. The query optimizer can be configured to achieve different optimization goals, allowing optimization of query execution for different workloads like OLTP vs. OLAP.

Query execution plans generated by the optimizer can be easily analyzed using system procedures or the DBA Cockpit. Optimization hints allow database administrators to tweak questionable query access plans in a more efficient way.

9.2 Database Scalability

SAP ASE provides many ways of making use of parallel resources.

Today's SMP system offers:

- Threaded kernel within ASE-internal task dispatcher
- Parallel object reorganization
- Parallel index build
- Parallel query execution
- Parallel backup and restore

9.3 Virtualization

Since customer demands for support of virtualization are rapidly growing, SAP offers support for running its applications in virtualized cloud environments. SAP ASE can as well be used in a virtual environment.

SAP Landscape Virtualization Management (LVM) is available for Business Suite on SAP ASE.

For more information, refer to SAP Note 1630050 and SAP Note 1492000.

10 Security

SAP ASE provides many features for securing database access and data stored in the database:

- Strong password encryption
- Encrypted client-server communication (SSL)
- Encrypted storage (column level encryption)
- Logon trigger for blocking access from unwanted networks
- Flexible build-in auditing system

SAP Business Suite applications on ASE use the standard procedures for user management and authentication provided with the SAP NetWeaver Application Server ABAP and Java:

http://help.sap.com → SAP NetWeaver → <Release> → Security Information → Security Guide → English → SAP NetWeaver Security Guide

For information on special security procedures for SAP applications on ASE, refer to the Security Guide for SAP Adaptive Server Enterprise:

SAP Service Marketplace → SAP NetWeaver → SAP NetWeaver <Release> → Operations → Database-Specific Guides

You need to ensure

- the security of operating system users, database logins, and SAP system users
- the deletion of the installation directory after the installation of an SAP application on ASE
- a well-defined network topology to eliminate security threats based on software flaws or network attacks such as eavesdropping

Network and Transport Layer Security:

http://help.sap.com → SAP NetWeaver → <Release> → Security Information → Security Guide →English → Network and Communication Security

Connectivity and Interoperability Technologies:

http://help.sap.com → SAP NetWeaver → <Release> → SAP NetWeaver Security Guides → Security Guides for Connectivity and Interoperability Technologies.

11 Migration

11.1 Basics for Migration of SAP NetWeaver Systems

To support migrations, SAP provides Migration Services. These include services, tools, and documentation. The services provided include help in planning the migration (checking the project plan) as well as support for the SAP tools and a GoingLive-Migration Check. In this way SAP offers delivery of services to support you in all the phases of your migration project. The project plan check ensures that you have not overlooked any important steps during planning and that the time frame for the project is reasonable. SAP tools enable you to check that your data is complete and consistent.

Migration to SAP ASE is supported by various offerings from SAP:

- Engineering Services from SAP Active Global Support for SAP MaxAttention and SAP ActiveEmbedded customers. Visit www.sap.com/services to learn about SAP ActiveEmbedded and the overall SAP Services portfolio.
- Rapid Deployment Solutions
- Heterogenous System Copy

For more information, refer to SAP Note 1680803.

11.2 Migration of SAP NetWeaver BW Systems

Migration procedures for SAP NetWeaver BW, and applications like SCM (APO), SAP SEM, or SAP Solution Manager that include SAP NetWeaver BW, are usually more complex than other migrations.

In order to achieve optimum performance on different database platforms, SAP NetWeaver BW uses special database-specific features that cannot easily be mapped to each other and that are not explicitly represented in the ABAP Dictionary. Therefore, an SAP migration procedure for SAP NetWeaver BW contains additional steps:

Implement one of the following SAP notes before the migration in the source system:

1605169 SYB: SAP BW 7.02 Correction Collection

1608417 SYB: SAP BW 7.30 Correction Collection

1616726 SYB: SAP BW 7.31 Correction Collection

1821924 SYB: SAP BW 7.40 Correction Collection

Carefully follow the instructions in SAP Note 888210 NW 7.**: System copy (supplementary note) before you start the migration.

Database migrations with SAP ASE as the target database require special attention if F fact tables are to be created without partitions in the target database. Perform additional configuration steps in the source system of the migration before performing any other migration steps.

For more information, refer to SAP Note 1691300 (SYB: Unpartitioned F fact tables for InfoCubes).

12 SAP Notes for Business Suite on SAP ASE

Note Number:	Title:
1554717	SYB: Planning Information for SAP on ASE
1799291	SYB: Inst. Systems Based on NW7.0 and higher: SAP Sybase ASE
1748888	SYB: Inst. Systems Based on NW7.3 and higher: SAP Sybase ASE
1539125	SYB: Configuration Guide for SAP Sybase ASE 15.7
1539124	SYB: Database Configuration for SAP on Sybase ASE
1722359	SYB: Running SAP on Sybase ASE – Best Practice
1650511	SYB: High Availability Offerings with SAP Sybase ASE
1588316	SYB: Configure Automatic Database and Log Backups
1680803	SYB: Migration to SAP Sybase ASE – Best Practice
1585981	SYB: Ensuring Recoverability for SAP Sybase ASE
1611715	SYB: How to Restore a Sybase ASE Database Server (Windows)
1618817	SYB: How to Restore a Sybase ASE Database Server (UNIX)
1599814	SYB: Installing ESDs for Sybase ASE 15.7 (UNIX + Linux)
1607816	SYB: Installing ESDs for Sybase ASE 15.7 (Windows)
1558958	SYB: DBA Cockpit Correction Collection SAP Basis 7.02 / 7.30
1619967	SYB: DBA Cockpit Correction Collection SAP Basis 7.31
1605169	SYB: SAP BW 7.02 Correction Collection
1608417	SYB: SAP BW 7.30 Correction Collection
1616726	SYB: SAP BW 7.31 Correction Collection
1616726	SYB: SAP BW 7.31 Correction Collection
1821924	SYB: SAP BW 7.40 Correction Collection
1750510	SYB: FAQ: SAP Sybase ASE 15.7 Compression
1593987	SYB: Monitoring Non-SAP ASE Databases with the DBA Cockpit
1602547	SYB: Current syb_update_db Script Versions
1507573	SYB: External DB Connect to an SAP Sybase ASE Database
1706410	SYB: Security - Changing Passwords for Database Users
1704719	SYB: Distributed Installation in Heterogeneous Environments

Note Number:	Title:
1891560	SYB: Disaster Recovery Setup with Sybase Replication Server

13 Online Information for Business Suite on SAP ASE

More information is available online:

- SAP ASE on sap.com
- SAP Sybase Adaptive Server Enterprise
- SAP Community Network
- SAP Help Portal

www.sap.com/contactsap

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