

SAP Sybase ASE 15.7



Training Agenda

	Sr No	Topic details
Day 1 and 2	1	Introduction to ASE
	2	ASE server components
	3	ASE multiple databases
	4	System tables & procedures
	5	ASE directory structure
	6	Starting & stopping server
	7	ASE configuration file
		Lab exercise
Day 3 and 4	8	ASE memory components
	9	Cache types and usage
	10	ASE devices
	11	Database and options
	12	Manage database in ASE
	13	Administering system roles and logins
	14	Managing database access and users
	15	Implementing object permissions, groups and roles
	16	Database Backup & recovery
		Lab exercise
Day 5 and 6	17	Sybase utilities
	18	Monitoring ASE using dbacockpit
	19	Maintenance tasks and commands
	20	Basic understanding of sp_sysmon
	21	Sybase SP patching
		Lab exercise

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Client Utility Program in Sybase ASE



Client Utility Programs

- Sybase Central a GUI system management program
- bcp a program that copies data to and from a file
- optdiag a program for detecting inefficient space usage in tables using data-only locking
- SQL Debugger (sqldbgr) a command-line utility that debugs stored procedures and triggers
- ddlgen a Java-based tool that generates definitions for server- and database-level objects in Adaptive Server
- sybmigrate moves schema and data from one ASE server to another

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bcp program



 ${\tt sybesp@encsapespci:} {\tt ~/dba_work>~bcp~master..sysdatabases~out~db-names.out~-Usapsa~-SESP~-c~Password:}$ Starting copy... 9 rows copied.

Clock Time (ms.): total = 39 Avg = 4 (230.77 rows per sec.)

You have new mail in /var/spool/mail/sybesp

sybesp@encsapespoi:-/dba_work>
sybesp@encsapespoi:-/dba_work>
sybesp@encsapespoi:-/dba_work>
cat db-names.out

master 1 1 1 1 8784 Apr 5 2014 4:19:52:173FM

21072 16384 1 0 1
 sybesp@encsapespcit=/dba_work>
 cast db-names.out

 master 1
 1
 1
 8784
 Apr 5 2014 4:19:52:173FM
 Aug 8 2015 5:48:01:220AM
 -3276

 31072
 16384
 1
 1
 918
 Apr 5 2014 4:19:52:173FM
 Jul 17 2015 4:13:01:186AM
 -3276

 31072
 16384
 1
 0
 1
 1
 1
 918
 Apr 5 2014 4:19:52:173FM
 Jul 17 2015 4:13:01:186AM
 -3276

 31072
 540672
 6
 0
 1
 1
 1
 918
 Apr 5 2014 4:19:52:173FM
 Jul 17 2015 4:13:01:186AM
 -3276

 31072
 540672
 6
 0
 1
 1
 1
 918
 Apr 5 2014 4:19:52:173FM
 Jul 17 2015 4:16:38:183AM
 -3276
 39bsystemdb
 31513 1
 9
 1
 925 Apr 5 2014 4:19:52:173FM
 Jul 17 2015 4:16:38:183AM
 31072 6:384
 1
 0
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 1
 1</td -32768 0 -32768 0 34257 Jul 16 2015 6:30:25:330AM Aug 9 2015 5:01:41:803PM -32767 0 Apr 5 2014 4:19:52:173PM Jul 17 2015 4:16:35:183AM -32768 0 -32768 0 Aug 6 2015 5:25:29:930AM -32768 0 Aug 9 2015 5:01:41:323PM 1 0

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-32767 0

OPTDIAG tool



sybesp@encsapespci:~/dba_work> optdiag statistics ESP..USR02 -Usapsa -SESP -oUSR02.opt Password: ptDiag/15.7/EBF 24647 SMP SP134 /P/x86_64/Enterprise Linux/ase157sp133x/3925/64-bit/OPT/Sat May 2 00:36:20 2015
Adaptive Server Enterprise/15.7/EBF 24647 SMP SP134 /P/x86_64/Enterprise Linux/ase157sp133x/3925/64-bit/FBO/Sat May 2 10:31:07 2015 Server name: Specified database: Specified table owner: Specified table: Specified column: not specified "USR02" not specified "SAPSR3" "USR02" Table owner: Table name: Statistics for table: "USR02" Data page count:
Empty data page count:
Data row count:
Forwarded row count:
Deleted row count:
Deleted row count:
OAM + allocation page count:
First extent data pages:
Data row size:
Parallel join degree:
Unused page count:
OAM page count: 166 0 159.8823785099539236 0.0000000000000000000 71 Derived statistics:
Data page cluster ratio:
Space utilization:
Large I/O efficiency: 0.9379310344827586 0.6781171693752609 0.9415584415584416 Statistics for index: Index column list: Leaf count: Empty leaf page count: "USR02~0" (nonclustered)
"MANDT", "BNAME"
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DBCC check in Sybase ASE



A DBCC check should be executed at times when there is a low load on the database, because a DBCC check causes a very high I/O load. The duration of a DBCC check depends (among other things) to a very large extent on the size of the database and the hardware used.

• Executing the DBCC check:

The consistency of the <SID> database is checked using an SQL command in ISQL. To do this, enter the following SQL command into a input text file and save the result as a output text file:

- o dbcc checkdb(<SID>)
- dbcc checkalloc(<SID>)

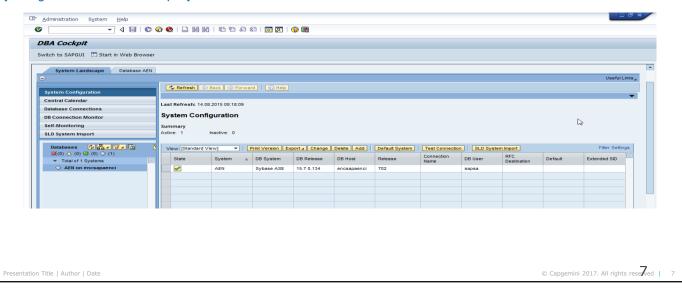
Example

isql -U sapsa -P <Password> -S <SID> -D <SID> -X -i <input text file name> -o <out put text file name>

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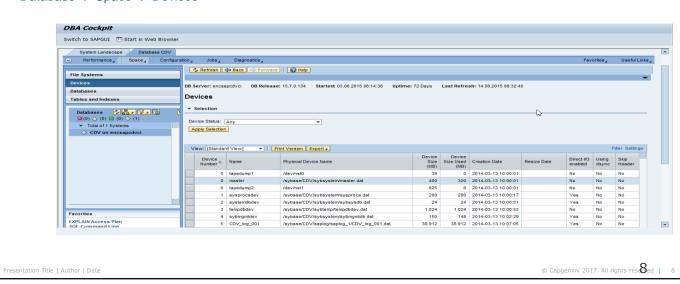


By using transaction 'dbacockpit' you can view below screen in SAP



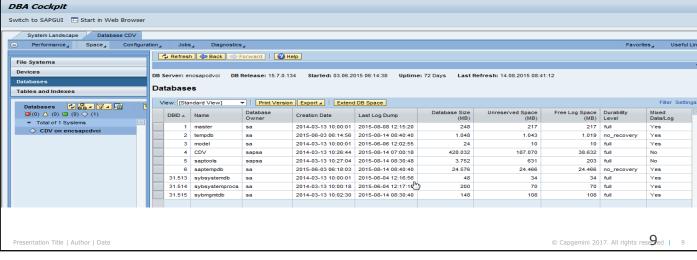


Database → Space → Devices





Database → Space → Databases

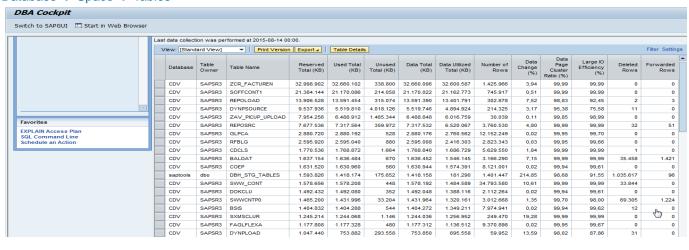




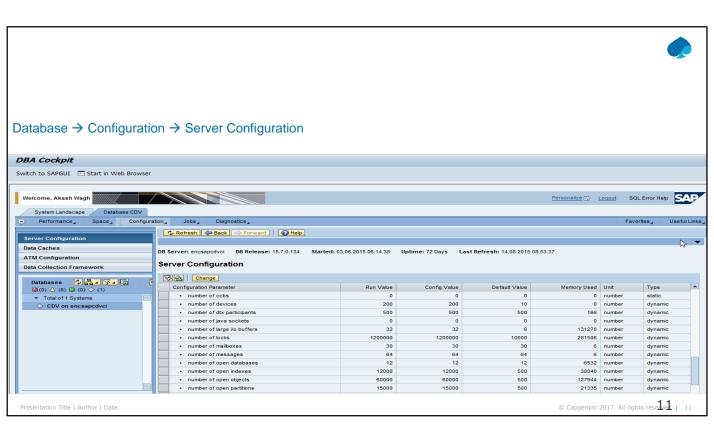
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Database → Space → Tables

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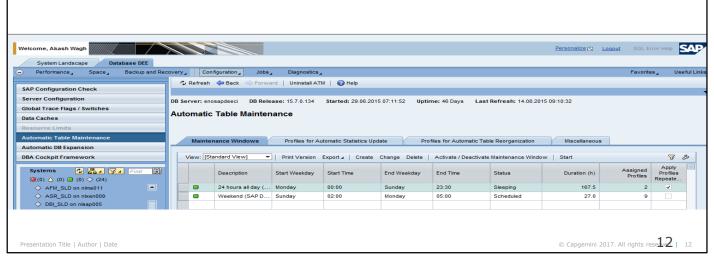


10



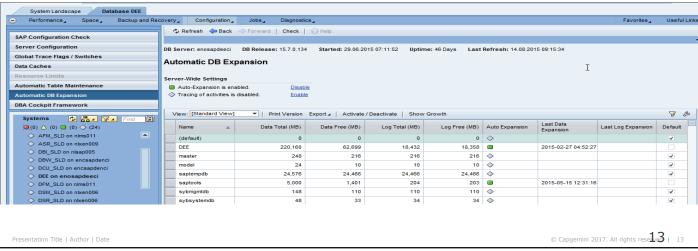


Database → Configuration → Automatic Table Maintenance



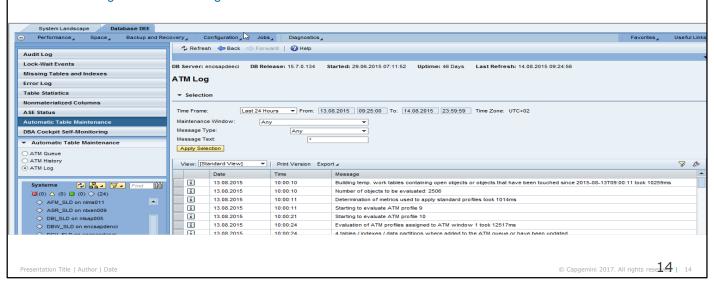


Database → Configure → Automatic DB Expansion





Database → Diagnostics → ATM log





Sybase SP patching →

Execution

Before installing a new SP, you must shut down the instance of ASE that is going to be updated. Logon to the host and execute as syb<sid>

As < sid>adm

stopsap

Check if the Database is running

ps -efa | grep -i syb<sid>

The ASE server must be offline during the update; otherwise files would be locked throughout the running database processes.

Download latest ASEUP.tgz and put it into the directory of the Update. 1599814 - SYB: Installina Servide Packs for Sybase ASE 15.7 (UNIX + Linux)

Updating the ASE software
Attached to the note is an archive 'ASEUP. tgg'. It contains a shell script 'ASEup.sh' and a file 'syb_update_db.TXT'.

As syb<sid>
 Go to <PATCH_DIR>
 cd SP_132
 ./ASEup.sh

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Update ODBC/JDBC drivers for SAP

Update of the ODBC and JDBC drivers

Logon as < sid>adm and execute the following statements.

```
>> cd <PATCH DIR>
>> SAPCAR -xvf DBCLIENT.SAR -R /usr/sap/sapmnt/<SID>/global/syb/linuxx86_64

[
```

Check Sybase version

Logon as syb < sid> and execute the following statements. Select @@sbssav

Select @@version

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Checking ASE instance status : \$SYBASE/ASE-15_0/install/showserver

Stopping ASE instance:

Login to isql prompt and execute any one command from below mentioned

Shutdown

Shutdown with nowait

Shutting down backup server:

1> shutdown SYB_BACKUP

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```
#### login into the sybase prompt
isql -U<username> -S<server name> -P<password>
e.g. isql -Usa -SGOLD -Psyb123
## To see current DB Name:
Select db_name()
## To see tables in the particular db
Select name from sysobjects where type = 'P'
## To get table information
sp_help table_name
## To get current date
select getdate()
## To take database Backup
dump database test2 to '/opt/sybbackup/test2/dump1.dump'
```

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```
## To Create Device
```

```
DATA:
```

```
disk init name = "test2_data",physname = "/opt/sybdata/test2/test2_data.dbf",
size = '50M'

disk init name = "testdb_data",physname = "D:\Sybase\database\testdb\testdb_data.dbf",
size = '50M'

LOG:

disk init name = "test2_log",physname = "/opt/sybdata/test2/test2.log",
size = '50M'

disk init name = "testdb_log",physname = "D:\Sybase\database\testdb\testdb.log",
size = '50M',dsync = true

## Create Database

Create Database test2 on test2_data = '45M' log on test2_log = '50M'

Create Database testdb on testdb_data = '50M' log on testdb_log = '50M'

## To Drop Device
```

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sp_dropdevice device_name

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```
#### database details

sp_helpdb -- for all databases

sp_helpdb <DB name> -- for particular database

#### use command to enter in the particular database

use <database name>
go

#### Device details

sp_helpdevice -- for all devices

sp_helpdevice <device name> -- for particular device

#### To take database backup

dump database <dbname> to <path/dumfile.dump>

#### To restore database backup

load database <dbname> from <path/dumpfile.dump>
#### To make database online
online database <dbname>
```

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