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October 12, 2017 5 minute read

# SAP AS ABAP Developer Edition: Steps to fix DBACOCKPIT and extending your DB space

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First of all, having SAP provide these Developer Edition ABAP servers for FREE is an absolute blessing! I'm sure the entire community is absolutely grateful and appreciate it – **I know I am!**

Here's the link to download the ABAP servers and there are also links to guides on how to install found on the same page, if you don't already know – <https://tools.hana.ondemand.com/#abap>

## Assigned tags

[ABAP Development](#)[SAP NetWeaver Application Server for ABAP](#)[ABAP\\_Trial](#)[dbacockpit](#)[free trial](#)

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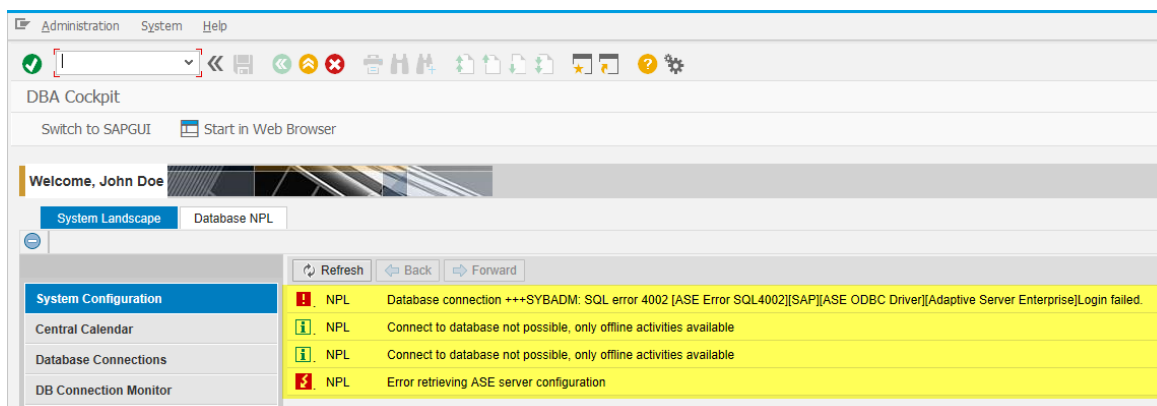
Anyway, I did notice a couple of issues when I first installed these instances with DBACOCKPIT and would like to share some of the fixes that I've done to my local instance. I've had these fixes 'documented' for a while but didn't have the time to publish them. But, here they are and I hope these will be useful to others too.

The steps below should be applicable to both the 750 SP02 and 751 SP02 versions.

**DISCLAIMER:** I am not a SAP Basis resource nor a SAP DBA, these steps below somehow worked for me and I certainly cannot guarantee that they will work for you too. **Proceed at your own risk** (especially the part about extending the DB)! I can not be held responsible if any of these steps below made your system unusable. **If you agree, you may proceed.**

## Error when executing transaction DBACOCKPIT

**ISSUE:** If you run transaction **DBACOCKPIT** after installing the server, you might notice the error messages below. I believe that's because the password for the user 'sapsa' was changed to the master password that we entered during installation and needs to be updated in the system.



### Related Questions

[AS ABAP 7.52 SP01 developer edition: DBACOCKPIT can't login to database](#)

By **Christian Guenter** , Sep 30, 2018

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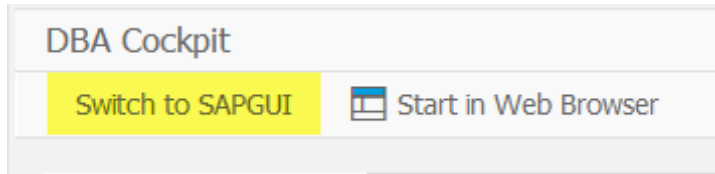
By **Nikhil Gupta** , Dec 18, 2018

[HANA Studio AIE ABAP Development Plugin - Can't create a New Project](#)

By **Former Member** , Aug 23, 2017

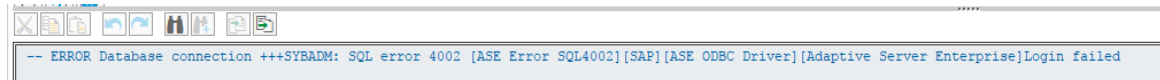
## SOLUTION:

**Step 1:** Switch to the SAPGUI version of the DBACOCKPIT



**Step 2:** Navigate to **System Landscape -> Database Connections ->** Then drop-down on the folder **SAP ASE** and select the node **+++SYBADM**.

If you click on the “**Test**” button before changing your username and password, you might see this error message below.



So, go ahead and click on the button ‘**Change User Credentials**’ and enter the following:

**Username:** *sapsa*

**Password:** *<your master password>* " The password you entered when prompted when installing the ABAP server

Database Connections

Last Refresh 10/12/2017 11:59:46

Database Connections

Total Number 2 Via RFC Destination

Display Test Edit Delete Add Change User Credentials

Remote Database Connection	DB Name	DB Host	DB Schema	User Name	P...	Ma...	O...
SAP ASE	NPL	vhcalnplci	NPL.SAPSR3	sapsa	<input type="checkbox"/>	0	0

**Step 3:** Validate that the username + password now works by clicking on the 'Test' button

Display Test Edit Delete Add Change User Credentials

Remote Database Connection	DB Name	DB Host	DB Schema	User Name	P...	Ma...	O...
SAP ASE	NPL	vhcalnplci	NPL.SAPSR3	sapsa	<input type="checkbox"/>	0	0

-- MESSAGE Database connection +++SYBADM established successfully

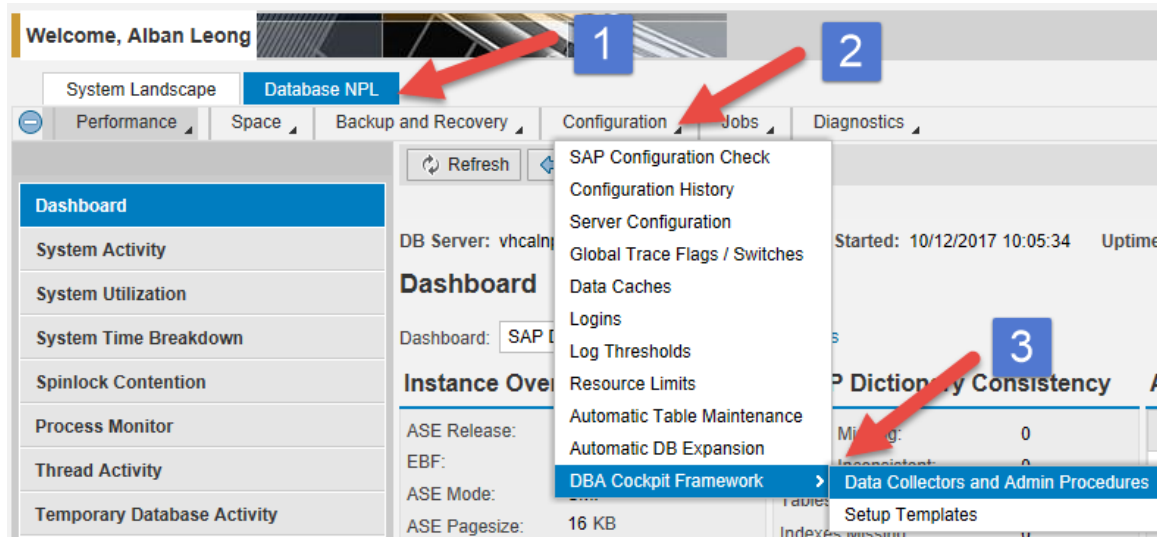
That's it! Now, if you restart the **DBACOCKPIT** transaction again, you no longer get the error messages that you saw earlier.

## Errors in DBACOCKPIT periodic jobs

Now, if you've fixed the issue above, you should now be able to go into DBACOCKPIT and explore around. Then, I noticed another issue...

**ISSUE:** Data Collector and other periodic jobs are getting some sort of authentication errors as well.

Go to the tab 'Database NPL', then click on the dropdown 'Configuration' -> DBA Cockpit Framework -> Data Collectors and Admin Procedures



Look at the 'Errors' column and select on one of the rows with Errors on it.

Back-end automatic update is enabled. [Change](#)

Task Scheduler: ASE Job Scheduler

Message Level: [Error Change](#)

Owner: NPL, SAP NetWeaver (07.51.0002)

Transfer Ownership

Object	Object Type	Setup	Collection Interval	Available Days	Days Kept in History	Size on Disk (MB)	Errors	W
Deadlocks and Lock-Timeouts	SAP Data Collection	●	15 Minutes	0	14	1	1	
Devices	SAP Data Collection	●	1 Hour	48	360	2	1	
Error Log	SAP Data Collection	●	5 Minutes	0	14	1	2	
File Systems	SAP Data Collection	●	1 Hour	0	14	1	1	
HA/DR Error Log	SAP Data Collection	◇	Not scheduled	0	14	0	0	
HA/DR Paths	SAP Data Collection	◇	Not scheduled	0	14	0	0	

And I saw the error entries below...

❗	01.09.2017	10:00:19	Job execution failed. See job history and log file for details.
⚠	01.09.2017	10:00:19	Server message:
⚠	01.09.2017	10:00:19	Msg 4002, Level 14, State 1:
⚠	01.09.2017	10:00:19	Server 'NPL':
⚠	01.09.2017	10:00:19	Login failed.
⚠	01.09.2017	10:00:19	Client message:
⚠	01.09.2017	10:00:19	Message number: LAYER = (4) ORIGIN = (1) SEVERITY = (4) NUMBER = (44)
⚠	01.09.2017	10:00:19	Message String: ct_connect(): protocol specific layer: external error: The attempt to connect to the server failed.

**SOLUTION:** After some Googling around, looks like we just need to drop and recreate the extern login for SYB\_JSTASK.

For this, go to the virtual machine and run XTERM and execute the following commands.

1. Switch over to user SYBNPL and enter your master password when prompted – **su sybnpl**
2. Then, login to the DB with isql – **isql -SNPL -Usapsa -X**
3. Enter password when prompted – **<master password>**

Then, let's validate to make sure that there is indeed a login for SYB\_JSTASK set up in the system. To do this, execute the following commands

1. **> use master**
2. **> go**
3. **> sp\_helpexternlogin**
4. **> go**

You should see a return of at least 1 row with the Server SYB\_JSTASK and Login/Externlogin with sapsa. Now, let's fix the issue by dropping the Externlogin and re-creating it again.

We execute **sp\_dropexternlogin** to drop it.

1. > **exec sp\_dropexternlogin SYB\_JTASK, sapsa**
2. > **go**

You should then see a message that says 'Remote login/alias dropped.'

Finally, we execute **sp\_addexternlogin** to recreate it again

1. > **exec sp\_addexternlogin SYB\_JTASK, sapsa, sapsa, '<master password>'**
2. > **go**

And that's it. If you have followed the steps above, you should get a similar screen as below.

```
alban@vhcalnplci:~  
alban@vhcalnplci:~$ su sybnpl  
Password:  
vhcalnplci /home/alban% isql -SNPL -Usapsa -X  
Password:  
1> use master  
2> go  
1> sp_helpexternlogin  
2> go  
Server          Externlogin          Login  
-----  
SYB_JTASK       sapsa                  sapsa  
(1 row affected)  
Server          Externlogin          Roles  
-----  
(0 rows affected)  
(return status = 0)  
1> exec sp_dropexternlogin SYB_JTASK, sapsa  
2> go  
Remote login/alias dropped.  
(return status = 0)  
1> exec sp_addexternlogin SYB_JTASK, sapsa, sapsa, '██████████'  
2> go  
(return status = 0)  
1> █
```

And now, if you go back into **DBACOCKPIT** and monitor the logs of the periodic jobs again, you should now see success entries instead of the error logs. *Refer to the green arrows below.*



Deadlocks and Lock-Timeouts	SAP Data Collection	■	15 Minutes	0	14	1	1
Devices	SAP Data Collection	■	1 Hour	48	360	2	1
Error Log	SAP Data Collection	■	5 Minutes	0	14	1	2
File Systems	SAP Data Collection	■	1 Hour	0	14	1	1
HA/DR Error Log	SAP Data Collection	◇	Not scheduled	0	14	0	0
HA/DR Paths	SAP Data Collection	◇	Not scheduled	0	14	0	0

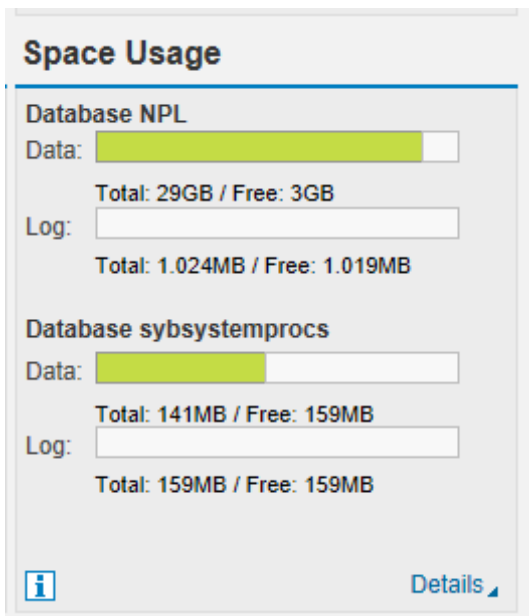
#### Deadlocks and Lock-Timeouts

Configuration				Object Log			
Refresh							
	Date	Time	Message				
■	01.09.2017	10:45:04	Start of routine: saptools.SP_DBH_LCKEVENTS (Log Level: 3)	■			
■	01.09.2017	10:30:04	Start of routine: saptools.SP_DBH_LCKEVENTS (Log Level: 3)	■			
■	01.09.2017	10:15:05	Start of routine: saptools.SP_DBH_LCKEVENTS (Log Level: 3)	■			
■	01.09.2017	10:00:19	Job execution failed. See job history and log file for details.	■			
■	01.09.2017	10:00:19	Server message:	■			
■	01.09.2017	10:00:19	Msg 4002, Level 14, State 1:	■			

Success!

## OPTIONAL: Add more space to database NPL by extending it

While browsing around DBACOCKPIT, I also noticed that the free space for database NPL is pretty limited. *There's about 3GB of free space left for the delivered AS ABAP 751 SP02 instance.*



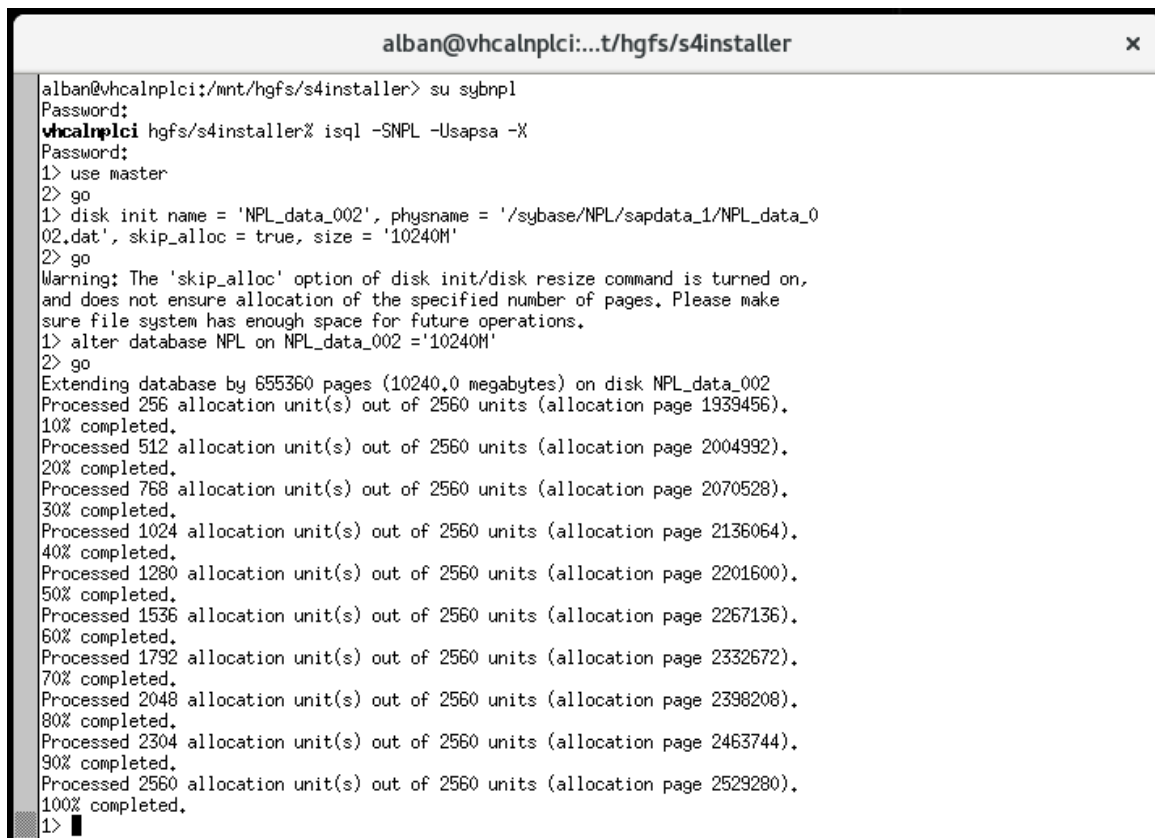
You can find the screen-shot above in **DBACOCKPIT** if you click to '**Database NPL**' tab, then **Performance -> Dashboard** and look under **Space Usage**.

**This step is completely optional.** 3GB should really be sufficient for a lot of the POCs or test development that I want to perform but I wanted to see if I could extend / add more space to this database. If you do too, you can follow the steps below, but please make sure that your virtual machine has enough free space to be allocated to the database. I am going to extend the database by another 10GB of space.

You need to be in the virtual machine and also be running XTERM to execute the steps below:

1. Switch over to user SYBNPL and enter your master password when prompted – **su sybnpl**
2. Then, login to the DB with isql – **isql -SNPL -Usapsa -X**
3. Enter password when prompted – **<master password>**

4. > use master
5. > go
6. > disk init name = 'NPL\_data\_002', physname =  
'/sybase/NPL/sapdata\_1/NPL\_data\_002.dat', skip\_alloc = true, size = '10240M'
7. > go
8. > alter database NPL on NPL\_data\_002 ='10240M'
9. > go



```
alban@vhcalnplci:...t/hgfs/s4installer x
alban@vhcalnplci:/mnt/hgfs/s4installer> su sybnpl
Password:
vhcalnplci hgfs/s4installer% isql -SNPL -Usapsa -X
Password:
1> use master
2> go
1> disk init name = 'NPL_data_002', physname = '/sybase/NPL/sapdata_1/NPL_data_0
02.dat', skip_alloc = true, size = '10240M'
2> go
Warning: The 'skip_alloc' option of disk init/disk resize command is turned on,
and does not ensure allocation of the specified number of pages. Please make
sure file system has enough space for future operations.
1> alter database NPL on NPL_data_002 ='10240M'
2> go
Extending database by 655360 pages (10240.0 megabytes) on disk NPL_data_002
Processed 256 allocation unit(s) out of 2560 units (allocation page 1939456).
10% completed.
Processed 512 allocation unit(s) out of 2560 units (allocation page 2004992).
20% completed.
Processed 768 allocation unit(s) out of 2560 units (allocation page 2070528).
30% completed.
Processed 1024 allocation unit(s) out of 2560 units (allocation page 2136064).
40% completed.
Processed 1280 allocation unit(s) out of 2560 units (allocation page 2201600).
50% completed.
Processed 1536 allocation unit(s) out of 2560 units (allocation page 2267136).
60% completed.
Processed 1792 allocation unit(s) out of 2560 units (allocation page 2332672).
70% completed.
Processed 2048 allocation unit(s) out of 2560 units (allocation page 2398208).
80% completed.
Processed 2304 allocation unit(s) out of 2560 units (allocation page 2463744).
90% completed.
Processed 2560 allocation unit(s) out of 2560 units (allocation page 2529280).
100% completed.
1> █
```

Done! Now, let's head back into DBACOCKPIT and see what we've done there.

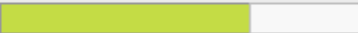
## Details of Database NPL

[Database](#)[Devices](#)[Fragments](#)[Segments](#)

	Name	Physical Device Name	Device Size (MB)	Used Size (MB)
	NPL_data_001	/sybase/NPL/sa...	31.744	26.501
	NPL_data_002	/sybase/NPL/sa...	10.240	41
	NPL_log_002	/sybase/NPL/sa...	1.024	4

## Space Usage

### Database NPL


Data: 

Total: 39GB / Free: 12GB


Log: 

Total: 1,024MB / Free: 1,019MB

### Database sybsystemprocs

Data: 

Total: 141MB / Free: 159MB

Log: 

Total: 159MB / Free: 159MB

[Details](#)

Ahhh.. now that's better!

That's all folks! **Good luck!**



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### 3 Comments

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 Alex Li

October 13, 2017 at 1:30 am

Good share. Add my two cents:

I'd like to do the two configuration changes for the database when setting up the DEMO server.

1. Enlarge the memory of ASE database.

This is controlled by ASE parameter "max memory", I'd like to set to 45% of memory of the virtual machine. e.g. if my VM memory is 8192MB then it will be 3686MB. Notice that the parameter is using 2KB as unit, so the actual value to be configured is:

$8192 * 45\% * 1024 / 2 = 1887436$

Then login ASE DB with user sybnpl with isql:

```
isql -X -W999 -SNPL -Usapsa -P<master password>
```

```
sp_configure "max memory", 1887436
```

```
go
```

-> This is a static parameter so you have to reboot ASE DB to take effect.

## 2. Enlarge the number of user connections of ASE DB.

After I installed the DEMO system I also notice that the default value of the "number of user connections" parameter is set too small (only 25) for AS ABAP application server. If I increase the number of work processes, then I got database related shortdumps to address this as well.

This is controlled by ASE parameter "number of user connections". It is a dynamic parameter, just set to 500 then usually you don't need to worry about it.

Then login ASE DB with user sybnpl with isql:

```
isql -X -W999 -SNPL -Usapsa -P<master password>
```

```
sp_configure "number of user connections", 500
```

```
go
```

-> This change takes effect immediately. (As long as the configured max memory is sufficient for ASE DB).

Best Regards,

Alex

Like (3)



[Alban Leong](#) | Post author

October 13, 2017 at 2:43 am

Thanks for the tips Alex! It's certainly very helpful as well!

Like (0)



[Ivan Gurin](#)

October 1, 2018 at 12:39 pm

Thank you for your input.

Like (1)

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