

**Laporan Praktikum Jobsheet 12**  
**Mata Kuliah Sistem Manajemen Basis Data**  
**“Monitoring SQL Server with Alerts and Notifications”**



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**JURUSAN TEKNOLOGI INFORMASI**  
**PROGRAM STUDI D-IV TEKNIK INFORMATIKA**  
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## 1.2 Konfigurasi Database Mail

- ❑ Lakukan konfigurasi Database Mail menggunakan wizard

New Database Mail Account

Specify name, description, and attributes for your SMTP account.

Account name:

Description:

Outgoing Mail Server (SMTP)

E-mail address:

Display name:

Reply e-mail:

Server name:  Port number:

☐ This server requires a secure connection (SSL)

SMTP Authentication

☐ Windows Authentication using Database Engine service credentials

☒ Basic authentication

User name:

Password:

Confirm password:

☐ Anonymous authentication

OK Cancel Help

Database Mail Configuration Wizard - DESKTOP-9GB5KEI

**New Profile**

Specify the profile name, description, accounts, and failover priority.

Profile name:

Description:

A profile may be associated with multiple SMTP accounts. If an account fails while sending an e-mail, the profile uses the next account in the priority list. Specify the accounts associated with the profile, and move the accounts to set the failover priority.

SMTP accounts:


Pri...	Account Name	E-mail Address
1	AdventureWorksAdministrator	khosy@gmail.com

Add... Remove Move Up Move Down






Database Mail Configuration Wizard - DESKTOP-9GB5KEI

**Configuring...**

Click Stop to interrupt the operation.

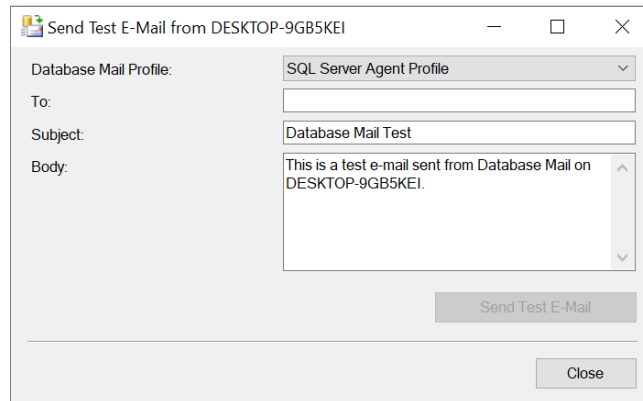
 **Success** 5 Total 0 Error  
5 Success 0 Warning

Details:

Action	Status	Message
 Create new account 'AdventureWorksAdminist...	Success	
 Create New profile 'SQL Server Agent Profile'	Success	
 Add account 'AdventureWorksAdministrator' t...	Success	
 Set default profile for 'guest' to 'SQL Server Ag...	Success	
 Set default profile for 'ExtractUser' to 'SQL Ser...	Success	

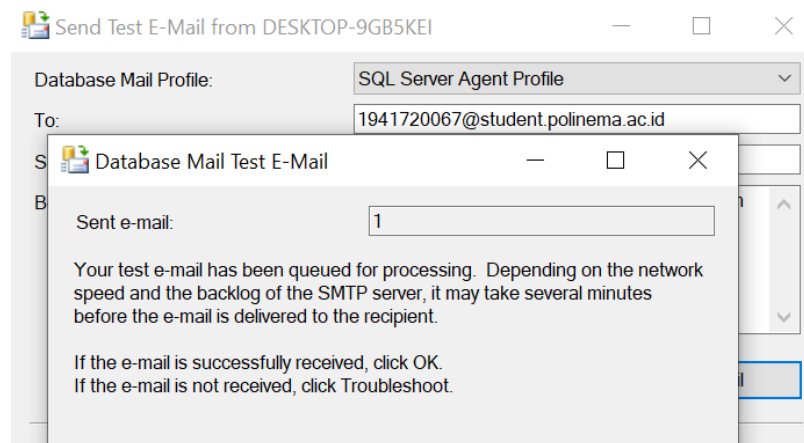
❑ Lakukan uji coba kirim email dari SQL Server:

a. Pada Object Explorer, klik kanan Database Mail dan klik Send Test E-Mail.



b. Pada Send Test E-Mail textbox ketikkan &quot;xxxx@gmail.com&quot;; (email tujuan) dan klik Send Test E-Mail.

c. Pada Database Mail Test E-Mail window, Perhatikan deskripsi yang keluar kemudian klik OK



❑ Lakukan pengecekan mail event log. Lakukan query berikut untuk mengetahui hasilnya :

```
SELECT * FROM msdb.dbo.sysmail_event_log;
GO
```

	log_id	event_type	log_date	description	process_id	mailitem_id	account_id	last_read_date
1	1	information	2021-05-03 20:13:32.290	DatabaseMail process is started	16720	NULL	NULL	20
2	2	error	2021-05-03 20:13:36.587	The mail could not be sent to the recipients bec...	16720	1	NULL	20
3	3	error	2021-05-03 20:14:39.823	The mail could not be sent to the recipients bec...	16720	1	NULL	20

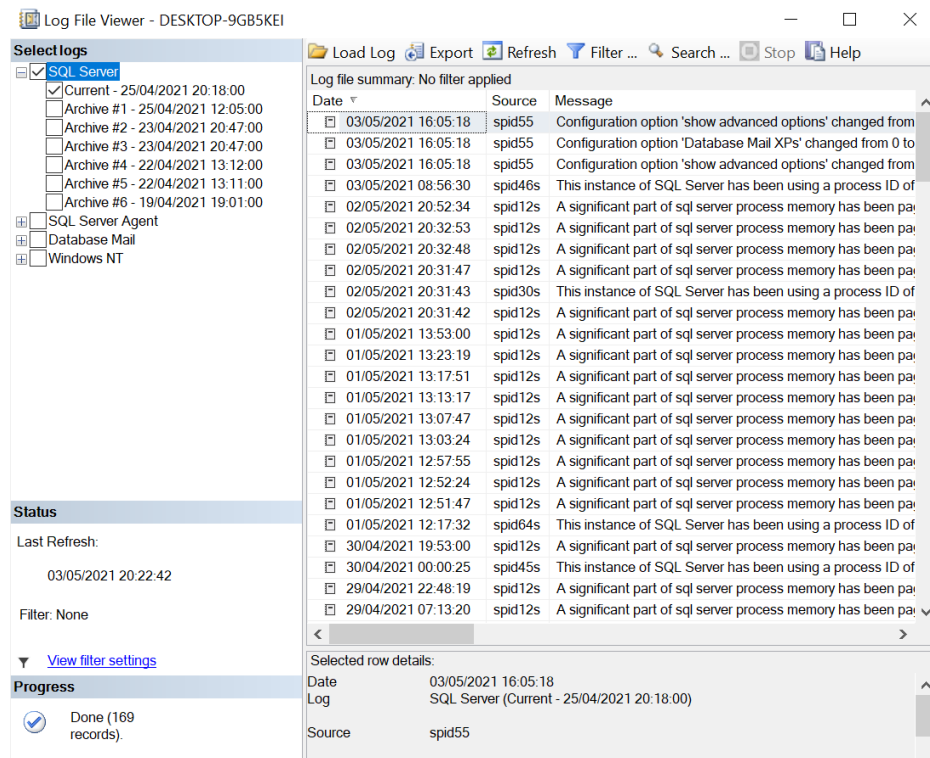
❑ Lakukan Query database mail outgoing mail log untuk mengetahui alamat pengiriman email yang pernah dilakukan dengan kode berikut

```
SELECT * FROM msdb.dbo.sysmail_mailitems;
GO
```

	mailitem_id	profile_id	recipients	copy_recipients	blind_copy_recipients	subject	from_address
1	1	1	1941720067@student.polinema.ac.id	NULL	NULL	Database Mail Test	NULL

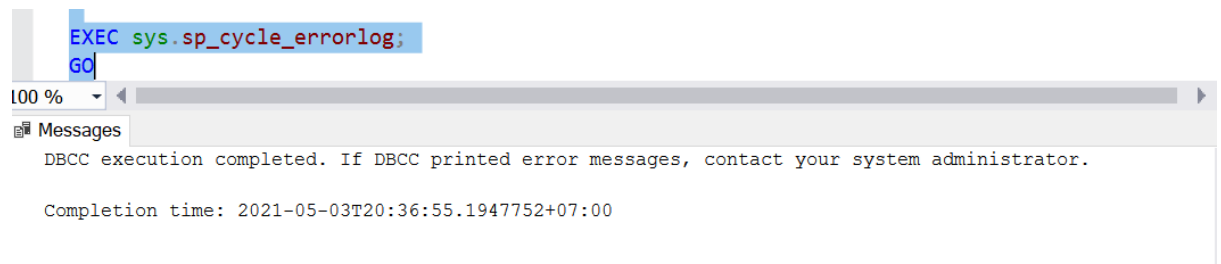
### 1.3 Cycling the Error Log

- ❑ Coba untuk melihat SQL Server log file saat ini (current) menggunakan wizard dengan tahapan berikut :
  - a. Pada Object Explorer, expand server Proseware
  - b. Expand Management
  - c. Expand SQL Server Logs
  - d. Kemudian klik kanan Current, dan klik View SQL Server Log

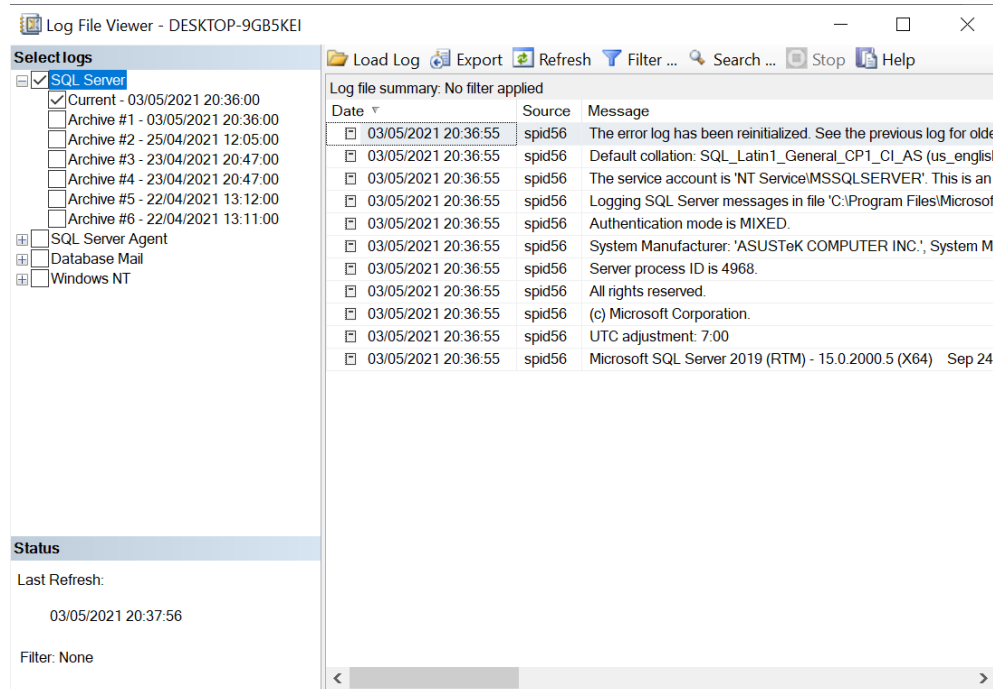


- e. Pada Log File Viewer - Proseware window, review beberapa log file yang masuk
- f. Pastikan untuk scroll window ke kanan untuk melihat kolom apa saja yang tersedia
- g. Kemudian Close window tersebut

- ❑ Lakukan Cycle untuk file log dengan kode program berikut

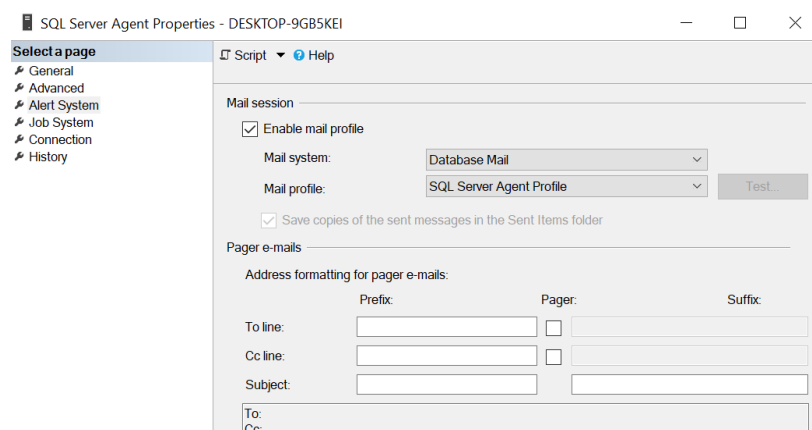


- ❑ Kemudian buka kembali current log file di SQL Server Management Studio. Pastikan log file tersebut sudah diinisialisasi ada detik terakhir perubahan sesuai percobaan 4 dengan tahapan sebagai berikut :
  - a. Pada Object Explorer, klik kanan current log
  - b. Klik View SQL Server Log.
  - c. Lihat konten isi log tersebut dan klik Close



## 1.4 Konfigurasi Operators, Alerts, dan Notifications

- ❑ Aktifkan SQL Server Agent Mail Profile dengan tahapan sebagai berikut :
  - a. Pada Object Explorer, expand the Proseware server
  - b. Klik kanan SQL Server Agent dan klik Properties.
  - c. Pada the SQL Server Agent Properties - Proseware window, pada pane Select a page, klik Alert System.
  - d. Pada opsi Mail session, check Enable mail profile.
  - e. Dari drop down Mail profile drop down, pilih SQL Server Agent Profile
  - f. Klik OK



## ❑ Buatlah operator baru

The 'Script' window shows the configuration for a new operator. The 'Name' field is set to 'DBA Support Team' and the 'Enabled' checkbox is checked. Under 'Notification options', the 'E-mail name' is set to '1941720067@student.polinema.ac.id'. The 'Pager e-mail name' field is empty. Under 'Pager on duty schedule', the 'Monday' and 'Tuesday' checkboxes are unchecked.

## ❑ Konfigurasi job Backup Log TestAlertDB

The 'Job Properties - Backup Log TestAlertDB' window shows the 'Notifications' tab. The 'Actions to perform when the job completes' section has the following settings: 'E-mail' is checked and set to 'DBA Support Team' with the trigger 'When the job completes'; 'Page' is unchecked; 'Write to the Windows Application event log' is unchecked; and 'Automatically delete job' is unchecked with the trigger 'When the job succeeds'.

## ❑ Jalankan job secara manual

The 'Start Jobs - DESKTOP-9GB5KEI' window shows a successful job execution. A green checkmark icon is displayed next to the word 'Success'. The 'Details' section shows a table with the following data:

Action	Status	Message
Start Job 'Backup Log TestAlertDB'	Success	
Execute job 'Backup Log TestAlertDB'	Success	

A 'Close' button is located at the bottom right of the window.

## ❑ Setelah itu cek apakah email sudah terkirim dengan kode berikut :

The screenshot shows a SQL query result in a database client. The query is: `SELECT * FROM msdb.dbo.sysmail_mailitems;`. The result set shows one row with the following data:

mailitem_id	profile_id	recipients	copy_recipients	blind_copy_recipients	subject	from_address
1	1	1941720067@student.polinema.ac.id	NULL	NULL	Database Mail Test	NULL

## 1.4.2 Langkah-langkah Percobaan

- ❑ Buat alert baru untuk Transaction Log full pada TestAlertDB

New Alert

Select a page: General, Response, Options

Script Help

Name: Transaction Log File TestAlertDB Full ☒ Enable

Type: SQL Server event alert

Event alert definition

Database name: TestAlertDB

Alerts will be raised based on:

☒ Error number: 9002

☐ Severity: 001 - Miscellaneous System Information

☐ Raise alert when message contains:

Message text:

Connection

- ❑ Lakukan konfigurasi respon

Select a page: General, Response, Options, History

Script Help

☒ Execute job

Backup Log TestAlertDB ([Uncategorized (Local)])

New Job... View Job

☒ Notify operators

Operator list:

Operator	E-mail	Pager
DBA Support Team	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- ❑ Eksekusi batch (kumpulan data) untuk mengisi transaction log dengan cara mengeksekusi kode

```
USE TestAlertDB;
GO

CREATE TABLE testtable
( id int identity(1,1) PRIMARY KEY,
  col1 char(2000)
);
GO

SET NOCOUNT ON;

WHILE 1 = 1
BEGIN
  INSERT INTO testtable (col1) VALUES('Test data!');
END
```

100 %

Messages

Msg 9002, Level 17, State 2, Line 38  
The transaction log for database 'TestAlertDB' is full due to 'LOG\_BACKUP'.

Completion time: 2021-05-03T21:54:18.6096609+07:00

- ❑ Kemudian lihat history dari alert

Select a page: General, Response, Options, History

Script Help

Date of last alert: 03 May 2021 21:54:23

Date of last response: 03 May 2021 21:54:23

Number of occurrences: 5

☐ Reset count

- ❑ Kemudian pastikan pula apakah email sudah terkirim dengan kode di bawah ini

```
SELECT * FROM msdb.dbo.sysmail_mailitems;
GO
```

	mailitem_id	profile_id	recipients	copy_recipients	blind_copy_recipients	subject
1	1	1	1941720067@student.polinema.ac.id	NULL	NULL	Database Mail Test
2	2	1	1941720067@student.polinema.ac.id	NULL	NULL	SQL Server Alert System: 'Transac
3	3	1	1941720067@student.polinema.ac.id	NULL	NULL	[The job succeeded.] SQL Server J
4	4	1	1941720067@student.polinema.ac.id	NULL	NULL	SQL Server Alert System: 'Transac
5	5	1	1941720067@student.polinema.ac.id	NULL	NULL	[The job succeeded.] SQL Server J
6	6	1	1941720067@student.polinema.ac.id	NULL	NULL	SQL Server Alert System: 'Transac
7	7	1	1941720067@student.polinema.ac.id	NULL	NULL	[The job succeeded.] SQL Server J
8	8	1	1941720067@student.polinema.ac.id	NULL	NULL	SQL Server Alert System: 'Transac
9	9	1	1941720067@student.polinema.ac.id	NULL	NULL	[The job succeeded.] SQL Server J
10	10	1	1941720067@student.polinema.ac.id	NULL	NULL	SQL Server Alert System: 'Transac
11	11	1	1941720067@student.polinema.ac.id	NULL	NULL	[The job succeeded.] SQL Server J

Query executed successfully. | DESKTOP-9GB5KEI (15.0 RTM) | DESKTOP-9GB5KEI\Asus (63) | TestAlertDB | 00:00:00 | 11 rows