**Alerts: Severity Levels**

* What are alerts?
* Setting up 17 thought 25 alerts via script
* Mapping alerts to DBA ADMIN operator
* Example of creating an alert for T-LOG Full

Events are generated by SQL Server and entered into the Microsoft Windows application log. SQL Server Agent reads the application log and compares events written there to the alerts that you have defined. When SQL Server Agent finds a match, it fires an alert

Types of problem:

 Severity level 10 messages are informational

 Severity levels from 11 through 16 are generated by the user

Severity levels from 17 through 25 indicate software or hardware errors

When a level 17, 18, or 19 errors occurs, you can continue working but check the error log

If the problem affects an entire database, you can use DBCC CHECKDB (database) to determine the extent of the damage

**Severity Level 17: Insufficient Resources**

These messages indicate that the statement caused SQL Server to run out of resources (such as locks or disk space for the database)

**Severity Level 18: Nonfatal Internal Error Detected**

These messages indicate that there is some type of internal software problem, but the statement finishes, and the connection to SQL Server is maintained. For example, a severity level 18 message occurs when the SQL Server query processor detects an internal error during query optimization.

**Severity Level 19: SQL Server Error in Resource**

These messages indicate that some no configurable internal limit has been exceeded and the current batch process is terminated. Severity level 19 errors occur rarely

**Severity Level 20: SQL Server Fatal Error in Current Process**

These messages indicate that a statement has encountered a problem. Because the problem has affected only the current process, it is unlikely that the database itself has been damaged.

**Severity Level 21: SQL Server Fatal Error in Database (dbid) Processes**

These messages indicate that you have encountered a problem that affects all processes in the current database; however, it is unlikely that the database itself has been damaged.

**Severity Level 22: SQL Server Fatal Error Table Integrity Suspect**

These messages indicate that the table or index specified in the message has been damaged by a software or hardware problem.

**Severity Level 23: SQL Server Fatal Error: Database Integrity Suspect**

These messages indicate that the integrity of the entire database is in question because of a hardware or software problem.

**Severity level 23 errors occur rarely; DBCC CHECKDB to determine the extent of the damage may be necessary to restore the database**.

**Severity Level 24: Hardware Error**

These messages indicate some type of media failure. The system administrator might have to reload the database. It might also be necessary to call your hardware vendor.

**Setting Up SQL Server Agent Alerts**

USE [msdb]

GO

EXEC msdb.dbo.sp\_add\_alert @name=N'Error 17 Alert',

@message\_id=0,

@severity=17,

@enabled=1,

@delay\_between\_responses=0,

@include\_event\_description\_in=1;

GO

EXEC msdb.dbo.sp\_add\_alert @name=N'Error 18 Alert',

@message\_id=0,

@severity=18,

@enabled=1,

@delay\_between\_responses=0,

@include\_event\_description\_in=1;

GO

EXEC msdb.dbo.sp\_add\_alert @name=N'Error 19 Alert',

@message\_id=0,

@severity=19,

@enabled=1,

@delay\_between\_responses=0,

@include\_event\_description\_in=1;

GO

EXEC msdb.dbo.sp\_add\_alert @name=N'Error 20 Alert',

@message\_id=0,

@severity=20,

@enabled=1,

@delay\_between\_responses=0,

@include\_event\_description\_in=1;

GO

EXEC msdb.dbo.sp\_add\_alert @name=N'Error 21 Alert',

@message\_id=0,

@severity=21,

@enabled=1,

@delay\_between\_responses=0,

@include\_event\_description\_in=1;

GO

EXEC msdb.dbo.sp\_add\_alert @name=N'Error 22 Alert',

@message\_id=0,

@severity=22,

@enabled=1,

@delay\_between\_responses=0,

@include\_event\_description\_in=1;

GO

EXEC msdb.dbo.sp\_add\_alert @name=N'Error 23 Alert',

@message\_id=0,

@severity=23,

@enabled=1,

@delay\_between\_responses=0,

@include\_event\_description\_in=1;

GO

EXEC msdb.dbo.sp\_add\_alert @name=N'Error 24 Alert',

@message\_id=0,

@severity=24,

@enabled=1,

@delay\_between\_responses=0,

@include\_event\_description\_in=1;

GO

EXEC msdb.dbo.sp\_add\_alert @name=N'Error 25 Alert',

@message\_id=0,

@severity=25,

@enabled=1,

@delay\_between\_responses=0,

@include\_event\_description\_in=1;

GO

**Configuring the SQL Server Operator**

USE msdb;

GO

EXEC msdb.dbo.sp\_add\_operator

@name = 'DBAs',

@enabled = 1,

@email\_address = 'DBAs@mycompany.com';

GO

EXEC msdb.dbo.sp\_add\_notification

@alert\_name = N'Error 17 Alert',

@operator\_name = 'DBAs',

@notification\_method = 1;

GO

EXEC msdb.dbo.sp\_add\_notification

@alert\_name = N'Error 18 Alert',

@operator\_name = 'DBAs',

@notification\_method = 1;

GO

EXEC msdb.dbo.sp\_add\_notification

@alert\_name = N'Error 19 Alert',

@operator\_name = 'DBAs',

@notification\_method = 1;

GO

EXEC msdb.dbo.sp\_add\_notification

@alert\_name = N'Error 20 Alert',

@operator\_name = 'DBAs',

@notification\_method = 1;

GO

EXEC msdb.dbo.sp\_add\_notification

@alert\_name = N'Error 21 Alert',

@operator\_name = 'DBAs',

@notification\_method = 1;

GO

EXEC msdb.dbo.sp\_add\_notification

@alert\_name = N'Error 22 Alert',

@operator\_name = 'DBAs',

@notification\_method = 1;

GO

EXEC msdb.dbo.sp\_add\_notification

@alert\_name = N'Error 23 Alert',

@operator\_name = 'DBAs',

@notification\_method = 1;

GO

EXEC msdb.dbo.sp\_add\_notification

@alert\_name = N'Error 24 Alert',

@operator\_name = 'DBAs',

@notification\_method = 1;

GO

EXEC msdb.dbo.sp\_add\_notification

@alert\_name = N'Error 25 Alert',

@operator\_name = 'DBAs',

@notification\_method = 1;

GO