**Maintenance Tasks on Davis**

**Daily Tasks**

**Backup’s checked:**

*Task:* Every Day Backup’s of the Databases (ektron76, thetweb, System Databases) should be checked if they are successfully done.

*Existing Task:*

There are maintenance plans in place for full Database backup on all the Databases (‘UserDBMaintenancePlan’ scheduled 1:30 AM every day; ‘SystemDbaMaintenancePlan’ scheduled 1:15 AM every day). Along with the backup of the Databases, they also do the below jobs.

1. Check Database Integrity
2. Shrink Database
3. Reorganize Indexes
4. Update Statistics
5. Delete history (Backup history in the Database, Log history in the Database)
6. Backup Database
7. Cleanup of the physical Database files older than 2 days from the disk .bak files

There are maintenance plans in place for transaction Log backup on ektron76 and thetweb Databases

1. ‘BackupTransactionOnEktron76’, this is scheduled at 4:00 AM everyday
2. ‘thetwebTransLogBackup’, this is scheduled to run after every 2 hours

There is maintenance plan in place to delete the maintenance plan text reports .txt which are older than two weeks and deletes the .trn Log files which are older than 2 days from the disk, this is scheduled to run at 11:45 PM every day.

**Checking Logs:**

There are two types of logs which have to be checked for any suspicious activity.

*Task:*

1. Logs on the Database can be checked via Management Studio. These logs include SQL server logs, SQL agent logs, Database mail logs, windows NT logs
2. Logs on the Database Server can be checked via perfmon.msc

*Existing Task:*None

**Disk Space Utilization:**

Monitor the disk space on the Server.

*Task:* Every day the disk space on the server should be monitored so that we don’t run out of space. This can be done via a procedure and scheduled to run every day and send of emails with data about space usage.

*Existing Task:* Solarwinds is monitoring CPU, Memory and Disk usage on the server. It notifies the web tem and John if any one of them hits the peek as defined in the job, these settings can be changed to notify in an earlier stage of the problem than the existing parameters.

**Data and Log files Growth Monitor:**

Monitor the data files and the log files of the Databases.

*Task:* This can be done via a T-SQL procedure and schedule to run every day and notify if there is a growth in the files or can be checked manually every day.

*Existing Task:* None

**Weekly Tasks**

**Index Rebuilds:**

*Task:* Rebuild indexes. Index rebuilds can be scripted and scheduled accordingly, based on the fragmentation of the indexes, schedule can be decided. Checking for fragmentation allows rebuilding only those indexes which are required to be rebuilt.

*Existing Task:* There is an existing maintenance plan (‘IndexesMaintPlan’ scheduled 4:15 AM every Sunday). This task also rebuilds the indexes on system databases, which is a debatable topic.

**Identify Long Running Queries:**

*Task:* Identify the top N queries based of the execution time and number of times executed on all the Databases and tune them for better performance to reduce the load on the server.

*Example:* Identified a procedure which is run few hundred times every week, performance the SQL can be improved by creating few indexes on the table but the data type of a column in the table has to be changed from NTEXT to any of the following VARCHAR (MAX), NVARCHAR (MAX), VARBINARY (MAX), XML as SQL server doesn’t allow indexing or including NTEXT columns in indexes. This is on Ektron76 Database.

*Existing Task:* None

**General Monitoring:**

*Task:* Monitor the trace now and then during the peak hours and look for any performance improvements based on the trace.

*Existing Task:* None

**Monthly Tasks**

Check for any available patches and version upgrades and any security measures which can be considered.

**Optional recommendations for one time change**

Set up the Idle CPU Condition in the Database instance. This setup will stop the scheduled jobs from kicking off, if the CUP is usage is high, which is defined while setting it up.