**SQL Server Maintenance**

**SQL Server Integration Services (SSIS) Project**

Server : UKDC1-PM-SQC01  
Location : E:\SSIS Projects\DBA Packages  
Project Name : DBA Packages

**SSIS Packages**

* **DBA-DiskSpaceUsageInfo** (DBA-DiskSpaceUsageInfo.dtsx)

***Description***: Collects disk space information of all the production servers.

Reads list of servers from “DBA\_CONFIG.dbo.DBA\_ServerInfoFiles” table on “UKDC1-PM-SQC01” server and collects the disk space information. Data is stored in “DBA\_SpaceTable” table for each day. Enable/Disable the server list by using the STATUS flag column.

The package initiates the PowerShell script -- SpaceCheck.ps1 (E:\MSSQL\PowerShell) passing the server name as parameter, to collect the disk space information for each server.

***Schedule***: The package runs under “DBA - Track Drive Space” SQL job on “UKDC1-PM-SQC01” server every day at 07:05:02.

***Additional Information***: This data is used in the “Disks Less Than 30% Free” SSRS report. This report is scheduled to deliver to [rsc\_dba@worldpay.com](mailto:rsc_dba@worldpay.com) inbox everyday at 08:00

**PowerShell Scripts**

Server : UKDC1-PM-SQC01  
Location : E:\MSSQL\Powershell

* **Tempdb Usage Check** (Tempdb\_Usage\_Check.ps1)

***Description***: Collects tempdb allocated size and used space information of all instances.

Reads list of instances from the “DBA\_CONFIG.dbo.DBA\_Server\_List” table on “UKDC1-PM-SQC01” server which are flagged (column name 🡪 TempdbCheck = 1), and collects information on tempdb data file and log file size, used size and percentage of space used and writes to “DBA\_CONFIG.dbo.DBA\_TempDBSizes” table. Sends email alert to [rsc\_dba@worldpay.com](mailto:rsc_dba@worldpay.com) if any file usage percentage exceeds the threshold. (Threshold value can be configured within the file. Variable 🡪 $threshold)

***Job and Schedule***:

Job Name : DBA - TempDB Usage Data Collection  
Schedule : Runs every 30 minutes  
Instance : UKDC1-PM-SQC01

***Additional information***: Email alert process of the script is using a temporary html file written to the location -- E:\MSSQL\Powershell\tempdb.html

* **SQL Blocking Analysis** (Blocking.ps1)

***Description***: Checks for any blocking events exceeds threshold on all instances

Reads list of instances from the “DBA\_CONFIG.dbo.DBA\_Server\_List” table on “UKDC1-PM-SQC01” server which are flagged (column name 🡪 BlockingCheck = 1), and collects blocking information exceeds the threshold, and sends email alert to [rsc\_dba@worldpay.com](mailto:rsc_dba@worldpay.com). (Threshold value can be configured within the file as the parameter “DurationToReport” of the “Get-SQLBlocking” method. (Current duration set to 60000ms=1 min))

Other references -- \EnhancedHTML2.ps1 (Builds HTML Output for email alert)

***Job and Schedule***:

Job Name : DBA - Check Blocking  
Schedule : Runs every minute  
Instance : UKDC1-PM-SQC01

* **Database Backup Status** (Collect\_Backup\_Data.ps1)

***Description***: Collects database backup information on all instances to a table

Reads list of instances from the “DBA\_CONFIG.dbo.DBA\_Server\_List” table on “UKDC1-PM-SQC01” server which are flagged (column name 🡪 BackupCheck = 1), and collects last full backup, last differential backup and last log backup time of each database, and writes to “DBA\_CONFIG. dbo.DBA\_Backup\_Status” table. There will be one record added for each day, for each database. Purge records older than 90 days. The collected data is used in the “Database Backup Status” report (BackupStatus.rdl) from SSRS.

Other references -- \DatabaseBackup.ps1 (Class Object Reference)  
 ***Job and Schedule***:

Job Name : DBA - DB\_Backups\_Status  
Schedule : Runs every day @ 10:00   
Instance : UKDC1-PM-SQC01

* **Collects Databases list and Size information** (Collect\_Databases\_List.ps1)

***Description***: Collects list of all active databases on all instances and data file size information.

Reads list of instances from the “DBA\_CONFIG.dbo.DBA\_Server\_List” table on “UKDC1-PM-SQC01” server which are flagged (column name 🡪 DBGrowthCheck = 1), and lists all the active databases on each instances, and adds (new) databases to the “DBA\_CONFIG.dbo.DBA\_Databases” table. Then reads list of all databases on each instance from the “DBA\_CONFIG.dbo.DBA\_Databases” table and gets the database data file and log file size, used size and unallocated space size, and writes to “DBA\_CONFIG.dbo.DBA\_DatabaseSizes” table.

The collected data is used in the “Datafile growth trend” (DatabaseFileGrowth.rdl) report, “Database growth trend” (DatabaseGrowth.rdl) report and “Datafile Size Tracking” (DatabaseSpaceUsage.rdl) report in SSRS.

***Job and Schedule***:

Job Name : DBA - Get Used DB Sizes  
Schedule : Runs every day @ 07:05   
Instance : UKDC1-PM-SQC01

* **Collect SQL Server Job History/Status information** (Collect\_JobHistory\_Data.ps1)

***Description***: Collects job status of all jobs on all instances.

Reads list of instances from the “DBA\_CONFIG.dbo.DBA\_Server\_List” table on “UKDC1-PM-SQC01” server which are flagged (column name 🡪 JobHistoryCheck = 1), and collects the latest job execution information (completed/running) of each instance and stored in the following tables - DBA\_CONFIG.dbo.DBA\_JobHistory and DBA\_CONFIG.dbo. DBA\_JobHistoryDetail. Only the latest data is stored in the tables.

The collected data is used in the “Job Status Report” report (JobStatusReport.rdl) from SSRS.

***Job and Schedule***:

Job Name : DBA - Check all Job History  
Schedule : Runs every 30 minutes   
Instance : UKDC1-PM-SQC01

* **Collect Mirroring State information** (Collect\_MirrorStatusData.ps1)

***Description***: Collects mirroring state information of mirrored databases on all instances.

Reads list of instances from the “DBA\_CONFIG.dbo.DBA\_Server\_List” table on “UKDC1-PM-SQC01” server which are flagged (column name 🡪 MirrorCheck = 1), and collects the mirroring state information for the last 2 hours of each mirrored database and stored in the following tables –DBA\_CONFIG. DBA\_global\_mirror\_monitor. Collected data is purged after 7 days.

The collected data is used in the “Mirror Status Report” report (MirrorStatusReport.rdl) from SSRS.

***Job and Schedule***:

Job Name : DBA-Collect Mirror Status Data  
Schedule : Runs every 2 hours   
Instance : UKDC1-PM-SQC01

**Alerts**

* **Deadlock Alert**

**Description:** Alert setup on all instances to capture deadlock and send email

SQL Server Agent Alert “Perf Deadlock” on each instance will trigger on any deadlock events and in response, execute the SQL Server Agent Job – “DBA - Deadlock Graph” which will send out email to [rsc\_dba@worldpay.com](mailto:rsc_dba@worldpay.com) with detailed information of the deadlock.

**Job and Alert Details**:

Alert Name : Perf Deadlock  
Instance : local instances  
Job Name : DBA - Deadlock Graph