**Database numbers- (Acquired from Microsoft Assessment and Planning – MAP utility)**

* Windows Servers: 440
* SQL Server instances (standard+): 152 – So roughly 1/3 of our windows server have SQL on them
* User databases: 831
* Data file total: 13.88/18.52 TB
* Log file total: 1.00/2.03 TB

**Daily SQL Server monitoring, checks and troubleshooting-**

Online:

1. Instances are up and available
2. SQL Server reporting services (SSRS)
3. Databases are online

Log checks:

1. SQL Error Log
2. Windows Event Log
3. SCOM
4. SSRS
5. Cluster

Performance monitoring:

1. CPU usage
2. Memory usage
3. Blocking\Locking
4. Poor performing SQL queries
5. Index fragmentation
6. Table Statistics

Database growth:

1. Data Files
2. Transaction Logs
3. Backups

High Availability:

1. Databases are synchronized
2. Latency is low

Database corruption (DBCC CHECKDB jobs):

1. Physical
2. Logical

Backups:

1. Nightly backups completed successfully (full backups)
2. Log backups are running regularly (every 4 hours for most systems)
3. Check nightly backup restores (SCM)

SQL Agent Jobs:

1. Application
2. CHOMP Custom jobs
3. CHOMP standard maintenance

**Enterprise Backup monitoring, checks and troubleshooting-**

Check daily failure list:

1. Investigate and fix backup failures (5-20 a day)

Check Activity Monitor:

1. Investigate partial backups

**New Projects\Forklift Upgrades-**

1. Evaluate system requirements and make recommendations
   1. Hardware
   2. Storage
   3. SQL version\edition
   4. Additional features (like SSRS)
2. Install SQL Server (\* optional features)
   1. Database Engine
   2. Management Studio
   3. Integration services
   4. \*SSRS
   5. \*Analytics
3. Apply Service Packs and Cumulative Updates
4. Configure SQL Server instance settings
   1. Create ‘sa’ account and set password
   2. Tempdb layout
   3. Min\Max Memory settings
   4. Max Degree of Parallelism
5. Configure database settings
   1. Database file layout
6. Setup standard maintenance plans\jobs (\* if not using Avamar SQL Agent)
   1. Integrity checks
   2. Index rebuilds
   3. Index reorganization
   4. Refresh statistics
   5. \*Full Backups
   6. \*Log backups
7. Install Avamar backup client and SQL agent and configure backups
8. Create\grant vendor\application accounts
9. Migrate to new instance if this is a Forklift Upgrade
   1. Data
   2. Accounts
   3. Custom CHOMP objects
10. Document new SQL Server instance (ITSM, PAR, Licensing list, MAP)

**Other Responsibilities-**

1. Maintain the AMPFM web reports application\database
2. Maintain the HIT turnover application\database
3. IIS administration\configuration tasks
4. SSRS administration\configuration tasks
5. Granting\revoking database access
6. Run\evaluate database traces
7. Troubleshooting
   1. Break\Fix
   2. Blocking\Locking
   3. General Performance\slowness
   4. Configuration
   5. Bad queries
   6. Storage
8. Create custom targeted maintenance scripts
   1. Index rebuilds
   2. Index reorgs
   3. Table\log resizing and cleanup
9. Help analysts write\improve queries
10. Restore databases\files on request
11. Copy\restore data to test\dev\train
12. Create data extracts for vendors (scripts\reports\backups)
13. Manual backup requests
14. Open support cases with Microsoft
15. Create custom database objects
    1. Databases (CHOMP\_TABLES)
    2. Linked servers
    3. Stored Procedures
    4. SQL Agent Jobs
16. Plan and install SQL Server upgrades and patches
17. Manage SQL Account Password changes (PAR)
    1. Every instance has at least an ‘sa’ account to manage
18. Needs requirement analysis
19. Security user access auditing (requests for reports)
20. Provide SQL Licensing numbers
21. Future storage growth planning and estimates
22. Keep up to date on latest features and developments for Microsoft SQL Server
23. Testing
    1. Management tools
    2. Applications
    3. Databases
    4. Servers
24. Training Admins\Analysts: QA
25. Working with vendors

**Catastrophic failure-**

1. Replication failure
2. Always On desynch and rebuild
3. Database corruption
   1. Logical
   2. Physical
4. Master database restores
5. Corrupt transaction logs

**My Projects-**

1. Develop a method to do test restores of SQL backups automatically on an ongoing basis
2. Develop a method to automatically document SQL instance and database configuration (powershell\MAP)
3. Convert daily checks application to powershell and ASP.net
4. Explore using Power View\SCOM\to implement live feed dashboards

**Current Work-**

1. Create a script to rebuild and reorganize indexes offline for SCM and gather timings to determine how much downtime it will take to defrag the indexes
2. Find a way to access the MAP database to pull out Windows server & SQL Server data that the MAP tool collects
3. Find a way to automatically run the MAP utility to collect data
4. Create powershell scripts to update my daily checklist application
5. Work with Jamie and Nancy to upgrade the AMPFM web reports application to work on newer versions of Windows\IIS and SQL Server.
6. Iatric project database install and build, data extracts from SCM and Kronos
7. Password vault database install and build
8. SCOM SQL monitoring tuning and new dashboard web app
9. Endotool project database install and build
10. Make SCMMAVM4P the automatic failover node for SCM production
11. Upgrade all SQL 2k, 2005 and 2008 instances to 2008 R2 or higher

**Upcoming Work-**

1. SCM 15.3 – Full forklift upgrade all new SQL builds