

Ajay Kumar Dwivedi

11+ Years of Exp. Lives in Hyderabad, India. Loves Building Automations & Resolve SQL Server Performance Issues.

I help clients to ensure Database Systems are Issue Free, Always Available, and running at Peak Performance State all the time.

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EMPLOYMENT

Senior Site Reliability Engineer, AngelOne (Feb 2022 - Present)

- Developed & baselined 48+ P1 SQL Server using own SQLMonitor project in a multi-domain environment.
- Developed advanced intelligent alerting system for events like Server Unavailability, Low Available Memory, High CPU, Blocking, Low Disk Space, etc using PowerShell & PagerDuty
- Performed Optimization of SQL Servers by implementing D.E.A.T.H method of Indexing bring down IO latency from 350+ ms to less than 9 ms.
- Tuned multiple queries using various tools like sp_BlitzCache, sp_WholsActive, XEvents (rpc_completed/sql_batch_completed)
- Implemented SQLTextNormalizer based infra with XEvent (resource_consumption) for performance tuning.
- Mentored developers in efficient query writing and performance tuning using techniques like 10x rule of cardinality, cut/combine queries, dealing with scaler functions, inlining of MSTVFs, pagination, columnstore indexes etc.
- Helped developers identify parameter sniffing issues causing query regression issues, and resolve them using various techniques.
- Resolved many complex query performance issues by solving Kitchen Sink design patterns.

Database Reliability Engineer, Arcesium (May 2020 - Feb 2022)

- Designed AlwaysOn RO Readiness solution using TSQL & PowerShell
- Designed PowerShell module to move Availability Group databases, and moved 38 TB data
- Provided Org Wide SQL Server Training
- Designed automation to setup remote Distributor in availability group using PowerShell
- Designed automation to setup Transactional replication using PowerShell
- Automated scripting out of entire SQL Server & Replications similar to Export-Dbalnstance
- Designed automations & Monitoring Dashboards on Grafana
- Resolved High CPU/Query Regression/IO Latency/Blocking Alerts
- Manage PostgreSQL servers/databases
- Resolved High CPU issues using Resource Governor & XEvents in multitenancy environment
- Brought down app query duration to seconds by converting multi day time filter query to SARGable predicates.
- Resolved query regressions by getting rid of issues like tempdb spills, wrong index choice, creating proper structure like indexed view, computed columns, and putting appropriate query hints

- Implemented Database Inventory and Monitoring System using Python/Django/PowerShell/SQL Server
- Created Alert/Monitoring System using PowerShell
- Automated Server Health Check for users using native tools
- Automated Installation/Configuration/Uninstallation of SQL Servers using PowerShell

Senior SQL Server DBA, United Health Group (Oct 2016 - Feb 2018)

- Saved \$1.0 million/year with Space Capacity Automation
- Handled VLDBs and took care of Core DBA Tasks

Senior SQL Server Developer, Ericsson (Jun 2015 - Oct 2016)

- Resolved SQL Server Performance Issue with Table Partitioning
- Mentored team and guided them with Query Performance Turning best practices
- Tripled Database server performance by Query Optimization

SQL Server DBA/Developer, TATA Consultancy Services (Mar 2011 - June 2015)

- Saved Hours of DBA efforts with TSQL scripts for SQL Instance Migration activity
- Mentored 5 developers and designed Data Warehouse using DB2 & Pentaho
- Successfully migrated Billions of data with efficient Tsql programming

Education

Bachelor of Engineering, RGPV University, Bhopal (July 2006 - Apr 2010)

OPEN SOURCE PROJECTS

SQLDBATools: PowerShell module to automate common DBA tasks and advanced alert setup.

MetaDataSync: PowerShell module to synchronize everything from Primary/Principal replicas to Secondary/Mirror/DR replicas in Always On/Mirror setup.

Space-Capacity-Automation: Stored Procedure that would add/restrict data and log files on new and old disk drives automatically without DBA intervention.

SQLDBA-SSMS-Solution: TSQL/PowerShell script for day to day DBA support work.

SQLMonitor: Automation to baseline SQL Server using TSQL, PowerShell, Perfmon & Grafana

sp_HealthCheck: Stored Procedure that would provide currently running queries, CPU and Memory usage, usage of Data and Log Volumes, space utilization of Data/Log files, Lead Blockers, and any Long Running request details. TSQL Programming

Credential Manager: Infra that provides storage/retrieval functionality similar to Windows Credential Manager. This is very helpful in environment where a proper vault/credential management software is not present.

Additional Experience And Awards

- Instructor (2008 2010): Taught 4 batches of C/C++ in coaching institute
- Multiple Award for Automation: Awarded multiple times for Space Capacity automation, Prod-Non-Prod
 DDL script comparison, Instance Migration automation and many more.
- Technical Blog Website: https://ajaydwivedi.com
- Online live YouTube tutorial sessions for L1/L2 Database Administrators & Developers

Languages and Technologies

Technologies

• HTML, CSS, SQL Server, Linux, CentOS8, Ubuntu, PostgreSQL

Tools

 Docker, Django, Bootstrap, JQuery, SQL Server, BrentOzarUnlimited First-Responder-Kit; SQLQueryStress; SQL Sentry Plan Explorer; Ola Hallengren Maintenance Solution; OStress; DiagManager; SQLNexus; Performance Monitor; SQL Profiler; SQL Trace; Clear Trace; Extended Events; ReadTrace; PAL; Django; CentOS; RHEL; Grafana;

Scripting

· PowerShell, TSQL, Python

Operating System

• RHEL 8, Ubuntu, Windows

Programming Models

• SOLID Principles

- MVT Architecture
- MVC Architecture