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 60+ 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_WhoIsActive, 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-DbaInstance
- 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

Senior SQL Server DBA, TiVo (Feb 2018 - May 2020)

- 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

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

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

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.

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.

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

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