

sqmSQLTool

sqmSQLTool in Daily DBA Work

Typical DBA Tasks · The Matching sqmSQLTool Command

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This overview maps typical DBA tasks to the matching sqmSQLTool command. It does not replace the full command reference (with parameters and examples) at powershelldba.de/sqmtool/commands-en — it is meant to make the quick lookup easier: “I want to do X, which command does that?”

Prerequisites

All commands assume an imported sqmSQLTool module (Import-Module sqmSQLTool), and usually dbatools as well.

For parameter details: Get-Help <Command> -Full, or the matching page in the online reference.

■ 1. Logins & Permissions

Task	Command	Note
A login is locked out due to CHECK_POLICY and needs to be unlocked	Unlock-sqmSqlLogin	Possible without a password reset (toggling CHECK_POLICY off/on) or with a real reset; verifies CHECK_POLICY/CHECK_EXPIRATION afterwards.
Check when a login last connected	Get-sqmLoginLastAccess	Combines live sessions and the error log; honestly returns “Unknown” when no evidence exists, instead of guessing.
Run a complete login audit (policy, password age, inactivity, duplicate SIDs, AD orphans)	Invoke-sqmLoginAudit	Audits the logins as objects (policy/password/origin) — not the login attempts themselves.
After a restore/move: reconnect a database user to the server login (orphaned user)	Sync-sqmDatabaseLogins	The classic ALTER USER ... WITH LOGIN problem after a SID mismatch.
Keep logins in sync across AlwaysOn replicas	Sync-sqmLoginsToAlwaysOn / New-sqmAutoLoginSyncJob	Automatically detects the current primary; the second command sets up the recurring Agent job.
Who has sysadmin on the instance?	Get-sqmSysadminAccounts	Resolved through group memberships too, not just direct logins.
Grant temporary sysadmin/dbcreator that revokes itself automatically	Grant-sqmTemporarySysadmin	Self-deleting Agent job on every AlwaysOn replica; survives failover.
List a specific login's permissions	Get-sqmLoginPermissions	Server- and database-wide rights in a single report.
Find/remove orphaned Windows logins (AD account no longer exists)	Remove-sqmAdOrphanLogin	Requires the ActiveDirectory module (RSAT).

Task	Command	Note
Check db_owner risk (who is owner, privilege-escalation potential)	Get-sqmDbOwnerRisk / Repair-sqmDbOwnerRisk	The second command automatically corrects detected risky owners.
Export/import logins for a migration	Export-sqmDatabaseLogins / Import-sqmDatabaseLogins	SIDs are preserved, important for later matching.
Terminate a specific SPID/session and notify the user	Stop-sqmSqlProcess	Notification via WTSSendMessage, works even without msg.exe.

■ 2. Auditing & Logs

Task	Command	Note
Search the SQL error log in a targeted way (failed logins, backups, errors, ...)	Get-sqmErrorLog	Language-neutral login detection; categories such as -FailedLogins, -Backups, -Errors; free-form -Pattern as a fallback.
Permanently capture logins, database create/drop, and schema changes	Register-sqmAuditSession	Builds a dedicated Extended Events session; categories selectable individually or via -All. Read back with Invoke-sqmExtendedEvents -Read.
Read blocking/deadlocks from a running Extended Events session or build a custom session	Invoke-sqmExtendedEvents	Templates: SlowQueries, Blocking, Waits, Deadlocks, AllInOne.

■ 3. Backup & Restore

Task	Command	Note
Run an automated restore test and produce evidence of it	Invoke-sqmRestoreTest / New-sqmRestoreTestJob	The second command sets up the recurring job; the evidence is audit material (retention configurable).
Restore a database into an existing AlwaysOn AG	Invoke-sqmRestoreDatabase	Handles the classic "Exclusive access" error robustly (Stop-DbaProcess instead of re-issuing SET SINGLE_USER).
Verify backup integrity, not just whether a backup exists	Test-sqmBackupIntegrity	Validates the backup itself, not only the msdb entry.
List the last restore per database on an instance	Get-sqmDatabaseRestoreHistory	Databases that were never restored are explicitly flagged, not silently omitted.
Set up a maintenance job for user database backups	New-sqmBackupMaintenanceJob / Invoke-sqmUserDatabaseBackup	Honors an optional exclude table (master.dbo.sqm_BackupExclude).
Install the Ola Hallengren maintenance solution, or verify its installation	Install-sqmOlaMaintenanceSolution / Test-sqmOlaInstallation	Covers the Backup, IndexOptimize, and IntegrityCheck jobs.

Task	Command	Note
Shrink the transaction log after excessive VLF growth	Invoke-sqmLogShrink	<i>A classic maintenance task after strong log growth.</i>

■ 4. AlwaysOn / High Availability

Task	Command	Note
Set up a new Availability Group	New-sqmAvailabilityGroup / Invoke-sqmAlwaysOnSetup	<i>The second command automates the entire setup process end to end.</i>
Add or remove a database from an AG	Add-sqmDatabaseToAG / Remove-sqmDatabaseFromAG	
Perform a controlled failover	Invoke-sqmFailover	
Health status of all AGs on an instance in one report	Get-sqmAlwaysOnHealthReport	<i>Sync status, redo/send queue, listener configuration, running autoseeding.</i>
Determine why and when the last failover happened	Get-sqmAlwaysOnFailoverHistory	<i>Reads event ID 1480 from the Windows Application Log — language independent.</i>
A replica is lagging behind, catch it up manually	Sync-sqmAgNode	
Rejoin a database into the AG after an unplanned event	Repair-sqmAlwaysOnDatabases / New-sqmAlwaysOnRepairJob	<i>The second command sets up a recurring job for this.</i>
Migrate the listener to a new cluster without downtime	Move-sqmAlwaysOnListener	<i>Prepared via Invoke-sqmListenerMigrationPrep.</i>
Compare logins or server roles across all replicas (drift check)	Compare-sqmAlwaysOnLogins / Compare-sqmAlwaysOnRoles	<i>Comparison only, no changes — a good first step before a sync run.</i>
Set up a Distributed Availability Group, or verify readiness for one	New-sqmDistributedAvailabilityGroup / Test-sqmDistributedAgReadiness	<i>For the “connect one AG to another AG in a different datacenter/domain” scenario.</i>

■ 5. Performance & Diagnostics

Task	Command	Note
Why is a query blocking right now?	Get-sqmBlockingReport	<i>A point-in-time snapshot; for history see Get-sqmBlockingHistory.</i>
Analyze blocking from the past hours retroactively	Get-sqmBlockingHistory	<i>Requires a one-time Register-sqmBlockedProcessMonitor plus 'blocked process threshold (s)' > 0.</i>
Analyze deadlocks (victim, involved statements, locks)	Get-sqmDeadlockReport	<i>Reads the system_health session, no extra configuration needed.</i>

Task	Command	Note
Find long-running queries	Get-sqmLongRunningQueries	
Identify missing indexes	Get-sqmMissingIndexes	
Analyze wait statistics	Get-sqmWaitStatistics	
Analyze connections per login/application	Get-sqmConnectionStats	
Create a performance baseline to detect deviations later	Invoke-sqmPerfBaseline	
Analyze or configure Query Store	Invoke-sqmQueryStore	

■ 6. Maintenance

Task	Command	Note
Check index fragmentation	Get-sqmIndexFragmentation	
Update statistics	Invoke-sqmUpdateStatistics	
Check autogrowth settings (percent instead of MB, too small/large)	Get-sqmAutoGrowthReport	<i>Also reads autogrowth events from the last few days out of the default trace.</i>
Track file growth over time and forecast when MaxSize will be reached	Get-sqmFileGrowthHistory	<i>Needs several runs before a forecast becomes possible.</i>
Overall health of a database in one report (backup age, autogrowth, VLF count, TRUSTWORTHY, isolation level)	Get-sqmDatabaseHealth	
Find orphaned files (.mdf/.ldf without a matching database)	Get-sqmOrphanedFiles	
Find or remove objects accidentally created in master	Get-sqmMasterDbCustomObjects / Remove-sqmMasterDbCustomObjects	<i>A whitelist for known maintenance scripts (Ola Hallengren, sp_Blitz*, sp_WhoIsActive) is configurable.</i>

■ 7. Configuration & Best Practices

Task	Command	Note
Check an instance against best practices (MAXDOP, Max Memory, Cost Threshold, xp_cmdshell, sa, ...)	Get-sqmSQLInstanceCheck	<i>A good first check on a newly taken-over instance.</i>
Set MAXDOP or Max Server Memory correctly	Set-sqmMaxDop / Set-sqmMaxMemory	<i>Recommendation based on core count or available RAM.</i>

Task	Command	Note
Compare server configuration between two instances	Compare-sqmServerConfiguration	<i>Useful before/after a migration or a patch.</i>
Export an instance's configuration for documentation purposes	Export-sqmServerConfiguration	
Check whether an instance is up to date on patches	Invoke-sqmPatchAnalysis	<i>Compares the installed version against a reference table of known CU/SP levels.</i>
Set up directory permissions for SQL Server	Invoke-sqmNtfsSetup	<i>Alias: Set-sqmSqlDirectoryPermissions.</i>

■ 8. Certificates & Encryption

Task	Command	Note
Set up encrypted connections (Force Encryption) with a real certificate	Set-sqmSqlTlsCertificate	<i>Binds a certificate from the machine store; a self-signed certificate alone does not protect against man-in-the-middle.</i>
Request a certificate, or create a renewal of an existing one	New-sqmCertificateRequest / New-sqmSqlCertificate	<i>The first command generates a CSR plus an order data sheet for a CA.</i>
Find expiring certificates across instances	Get-sqmCertificateReport	<i>Should run regularly as a job, not only on demand.</i>

■ 9. Active Directory

Task	Command	Note
List AD group members, including nested groups	Get-sqmADGroupMembers / Get-sqmADGroupMembersRecursive	
Search AD users by name pattern	Find-sqmADUser	
List all server objects from a specific OU	Get-sqmServersFromOU	<i>Useful for generating an instance list for bulk operations.</i>

Where do I find more?

Full command reference with all parameters, defaults, and runnable examples:
powershelldb.de/sqmsqltool/commands-en

Version-by-version change history: CHANGELOG.md in the repository —
github.com/JankeUwe/sqmSQLTool

If you are unsure which command is the right one: `Get-Command -Module sqmSQLTool -Noun *SearchTerm*` often gets you there faster than guessing.