Introduction to **dbachecks**

DBAVUG
2025.12.10

DBAVUG PowerShell Presentations

Sessions

- Oct 22nd - Introduction to PowerShell via dbatools - Je
- Nov 12th - Introduction to Pester - Rob
- Dec 10th - Introduction to dbachecks - Jordan
- Jan 28th - PowerShell Automation Magic 🪄 - Dream Team

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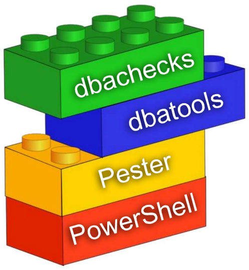
SQLskills SQL Server 2019 BLACKBELT

Review

Session 1:	Session 2:	Session 3:
Introduction to PowerShell via dbatools	**Introduction to Pester**	**Introduction to dbachecks**
▪ What and why is PowerShell ▪ How it can be useful for DBAs ▪ The dbatools module and why it's the best invention ever for DBAs	▪ Pester as a testing framework for PowerShell ▪ Writing Pester tests from scratch ▪ How to write tests for functions, unit tests, and integrations	

Agenda

What is dbachecks?

How to get started

Building out your daily checks

Configuration

Visualization/reporting

What is dbachecks?

- dbachecks is a powershell module by and for DBAs and data professionals who are interested in automating their routine database checks
- The dbachecks module is a set of cmdlets built using the dbatools and pester modules in order to perform various standard checks on your databases

What are some daily checks you need to confirm on your database instances?

For documentation, tips on getting started, and other info visit:
https://dbachecks.readthedocs.io/en/latest/

How to get started

1. Identify your most important daily checks

2. Set up the dbachecks and dependant powershell modules

3. Figure out the best output for you - we will start with results to screen

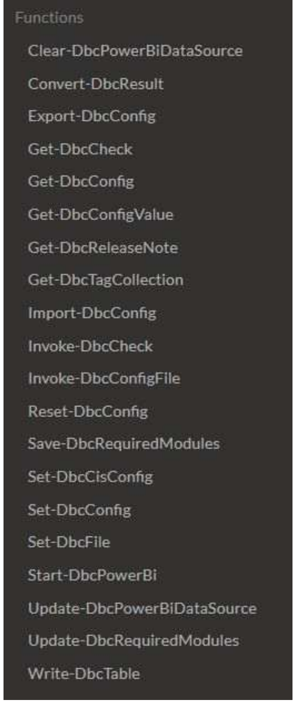
4. Try it out! We will start with default configuration

Install & Import PowerShell Modules

```
#Download the dbatools module from powershell gallery
#Download the dbachecks module from powershell gallery
#Run IDE as Administrator

Install-Module -Name dbatools
Import-Module -Name dbatools

Install-Module -Name dbachecks
Import-Module -Name dbachecks

#Set currentuser execution policy to RemoteSigned:
Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Scope CurrentUser

#Trust certificate
Set-DbatoolsInsecureConnection

#If issues with Pester module
Install-Module Pester -SkipPublisherCheck -Force -RequiredVersion 4.10.0
Import-Module Pester -Force -RequiredVersion 4.10.0
```

Demo

Getting started with dbachecks

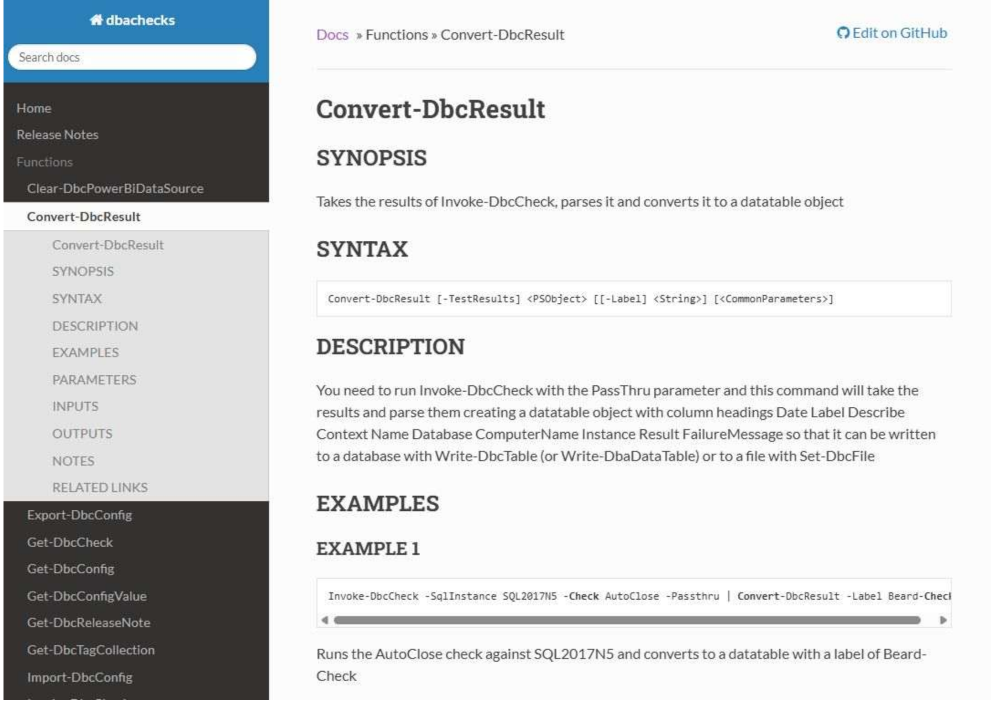


Functions

Clear-DbcPowerBiDataSource
Convert-DbcResult
Export-DbcConfig
Get-DbcCheck
Get-DbcConfig
Get-DbcConfigValue
Get-DbcReleaseNote
Get-DbcTagCollection
Import-DbcConfig
Invoke-DbcCheck
Invoke-DbcConfigFile
Reset-DbcConfig
Save-DbcRequiredModules
Set-DbcCisConfig
Set-DbcConfig
Set-DbcFile
Start-DbcPowerBi
Update-DbcPowerBiDataSource
Update-DbcRequiredModules
Write-DbcTable

Building out your daily checks

Where do I find more commands and how to use them?



Convert-DbcResult

SYNOPSIS

Takes the results of Invoke-DbcCheck, parses it and converts it to a datatable object

SYNTAX

```
Convert-DbcResult [-TestResults] <PSObject> [[-Label] <String>] [<CommonParameters>]
```

DESCRIPTION

You need to run Invoke-DbcCheck with the PassThru parameter and this command will take the results and parse them creating a datatable object with column headings Date Label Describe Context Name Database ComputerName Instance Result FailureMessage so that it can be written to a database with Write-DbcTable (or Write-DbaDataTable) or to a file with Set-DbcFile

EXAMPLES

EXAMPLE 1

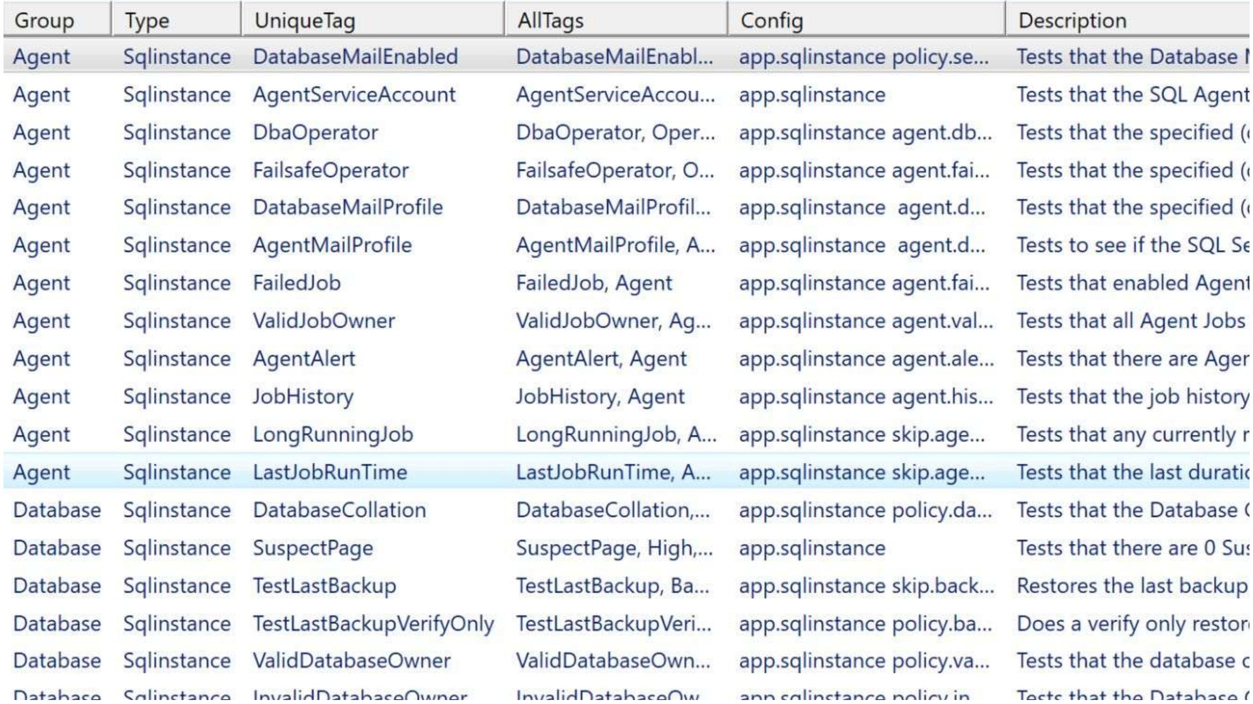
```
Invoke-DbcCheck -SqlInstance SQL2017N5 -Check AutoClose -Passthru | Convert-DbcResult -Label Beard-Chec
```

Runs the AutoClose check against SQL2017N5 and converts to a datatable with a label of Beard-Check

Building out your daily checks

Where do I find more commands and how to use them?

Can I run checks by category (tag)?



Group	Type	UniqueTag	AllTags	Config	Description
Agent	Sqlinstance	DatabaseMailEnabled	DatabaseMailEnabl...	app.sqlinstance policy.se...	Tests that the Database
Agent	Sqlinstance	AgentServiceAccount	AgentServiceAccou...	app.sqlinstance	Tests that the SQL Agent
Agent	Sqlinstance	DbaOperator	DbaOperator, Oper...	app.sqlinstance agent.db...	Tests that the specified (
Agent	Sqlinstance	FailsafeOperator	FailsafeOperator, O...	app.sqlinstance agent.fai...	Tests that the specified (
Agent	Sqlinstance	DatabaseMailProfile	DatabaseMailProfil...	app.sqlinstance agent.d...	Tests that the specified (
Agent	Sqlinstance	AgentMailProfile	AgentMailProfile, A...	app.sqlinstance agent.d...	Tests to see if the SQL Se
Agent	Sqlinstance	FailedJob	FailedJob, Agent	app.sqlinstance agent.fai...	Tests that enabled Agent
Agent	Sqlinstance	ValidJobOwner	ValidJobOwner, Ag...	app.sqlinstance agent.val...	Tests that all Agent Jobs
Agent	Sqlinstance	AgentAlert	AgentAlert, Agent	app.sqlinstance agent.ale...	Tests that there are Ager
Agent	Sqlinstance	JobHistory	JobHistory, Agent	app.sqlinstance agent.his...	Tests that the job history
Agent	Sqlinstance	LongRunningJob	LongRunningJob, A...	app.sqlinstance skip.age...	Tests that any currently r
Agent	Sqlinstance	LastJobRunTime	LastJobRunTime, A...	app.sqlinstance skip.age...	Tests that the last duratic
Database	Sqlinstance	DatabaseCollation	DatabaseCollation,...	app.sqlinstance policy.da...	Tests that the Database (
Database	Sqlinstance	SuspectPage	SuspectPage, High,...	app.sqlinstance	Tests that there are 0 Sus
Database	Sqlinstance	TestLastBackup	TestLastBackup, Ba...	app.sqlinstance skip.back...	Restores the last backup
Database	Sqlinstance	TestLastBackupVerifyOnly	TestLastBackupVeri...	app.sqlinstance policy.ba...	Does a verify only restor
Database	Sqlinstance	ValidDatabaseOwner	ValidDatabaseOwn...	app.sqlinstance policy.va...	Tests that the database c
Database	Sqlinstance	InvalidDatabaseOwner	InvalidDatabaseOw...	app.sqlinstance policy.in...	Tests that the Database (

Building out your daily checks

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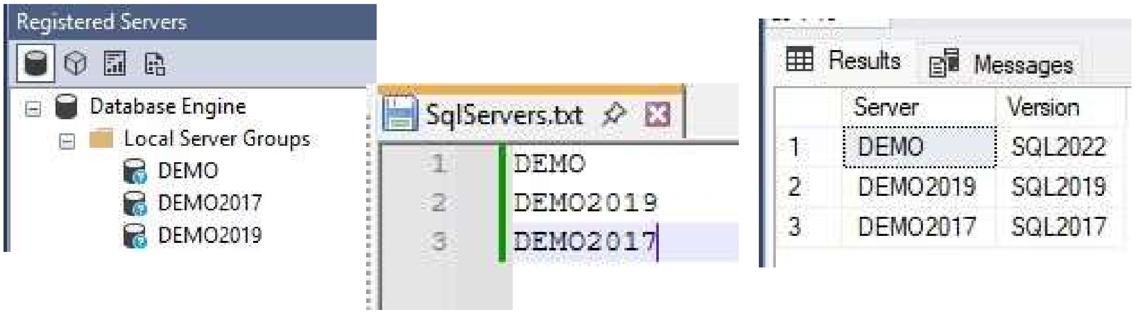
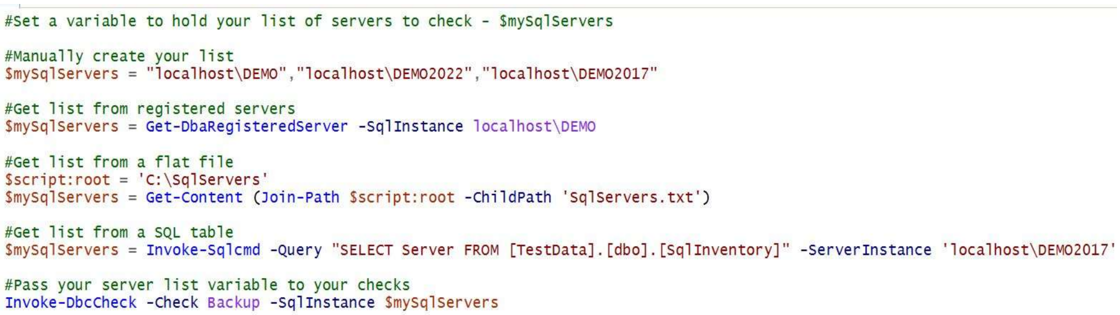
Do I have to input a list of each server every time?



DEMO
DEMO2017
DEMO2019

```
DEMO
DEMO2019
DEMO2017
```

	Server	Version
1	DEMO	SQL2022
2	DEMO2019	SQL2019
3	DEMO2017	SQL2017



```
#Set a variable to hold your list of servers to check - $mySqlServers

#Manually create your list
$mySqlServers = "localhost\DEMO","localhost\DEMO2022","localhost\DEMO2017"

#Get list from registered servers
$mySqlServers = Get-DbaRegisteredServer -SqlInstance localhost\DEMO

#Get list from a flat file
$script:root = 'C:\SqlServers'
$mySqlServers = Get-Content (Join-Path $script:root -ChildPath 'SqlServers.txt')

#Get list from a SQL table
$mySqlServers = Invoke-Sqlcmd -Query "SELECT Server FROM [TestData].[dbo].[SqlInventory]" -ServerInstance 'localhost\DEMO2017'

#Pass your server list variable to your checks
Invoke-DbcCheck -Check Backup -SqlInstance $mySqlServers
```

Building out your daily checks

Where do I find more commands and how to use them?

Can I run checks by category (tag)?

Do I have to input a list of each server every time?

How do I automate my checks?

Building out your daily checks

Where do I find more commands and how to use them?

Can I run checks by category (tag)?

Do I have to input a list of each server every time?

How do I automate my checks?

Can I make my own checks?

Configuration

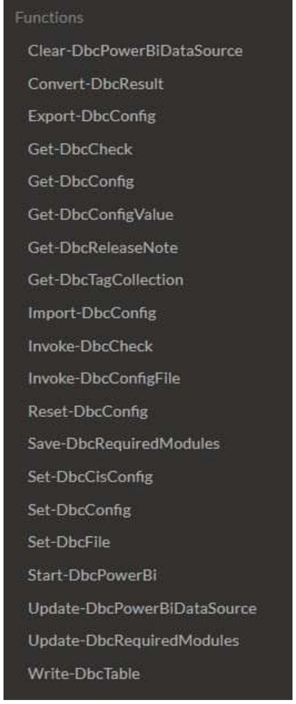
Where to find documentation and info

How to see configuration

How to update configuration

Multiple configuration files for different servers

Demo



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Write-DbcTable

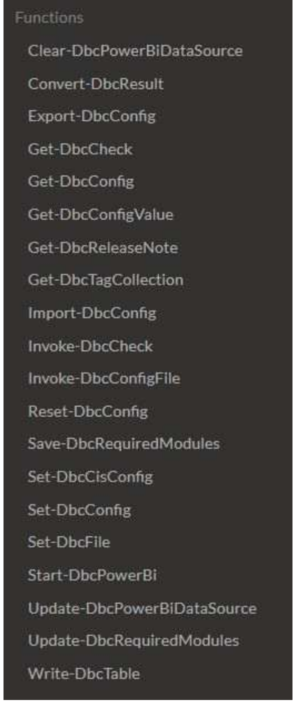
Visualization/reporting

Output to screen

Output to clipboard, text file, etc (powershell has loads of options for this!)

What else can we do?

Demo



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Frequently Asked Questions

- I set up emails to send every day from the sql agent with my daily checks. Why should I change anything?

- I’m not comfortable with powershell. Do I have to improve my powershell skills to use dbachecks?

- We already have xyz application to monitor our sql servers. Why should I use dbachecks when we already have that?

- Our teams set up their own reports on the sql instances they own and they want to keep those. We have way too many servers we would have to make changes on. Why should we bother with dbachecks?

Summary

What dbachecks can check

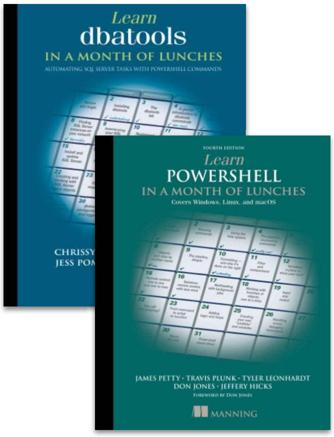
How to select and automate our own checks

How to run checks on our entire SQL estate

How to configure our checks based on our needs

How to display the results, including in a PowerBI dashboard

Recommended Additional Resources



Learn dbatools in a Month of Lunches:
https://www.manning.com/books/learn-dbatools-in-a-month-of-lunches

Learn PowerShell in a Month of Lunches:
https://www.manning.com/books/learn-powershell-in-a-month-of-lunches

Dbachecks official site:
https://dbachecks.readthedocs.io/en/latest/

Powershell/dbatools community on Slack:
https://dbatools.io/dbatools-is-now-on-the-sql-server-communitys-slack/

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Thank you!

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