

# How to Perform a SQL Server Health Check

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# My Goal for Today

- **I only have one main goal for this session**, and that is to persuade you of the importance of conducting regular health checks on your SQL Server instances to ensure that they are currently healthy, and continue to remain healthy.

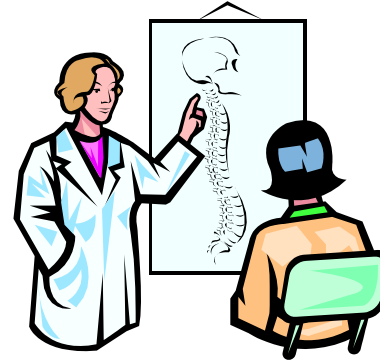
# Can You Honestly Answer This Question

- Are *all* the SQL Servers you manage running *optimally* and providing the high *availability* your organization expects of them?
- If your answer is *yes*, how do you know this?
- If your answer is *no*, then you had better find out the answer quickly if you want to excel as a professional DBA (and keep your job).
- Another goal of this session is to help you answer *yes* to the above question.

# What We Are Going to Learn Today

- What is a SQL Server Health Check
- Why Perform a SQL Server Health Check
- When Should You Perform a SQL Server Health Check
- What Tools Should You Use to Perform a SQL Server Health Check
- Introduction to the SQL Health Check Spreadsheet
- Recap

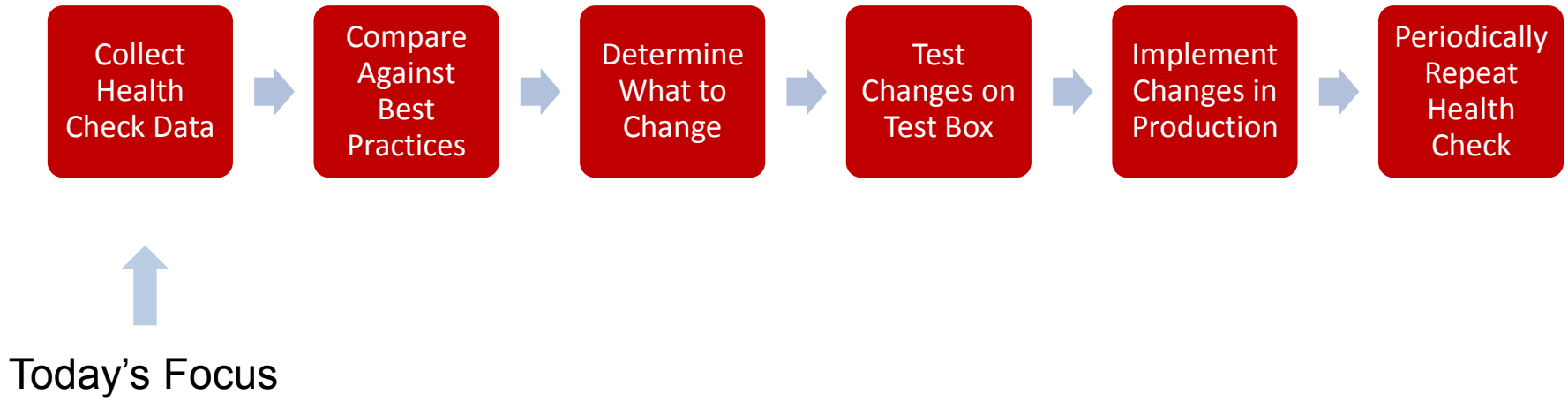
# What is a Health Check



# What is a SQL Server Health Check

- Essentially, a SQL Server Health Check includes:
  - Gathering detailed information about your SQL Servers (in effect, documenting them and also creating a baseline of data for future comparison).
  - Comparing collected data to established best practices to identify potential changes to your SQL Servers so that they meet these best practices.
  - Examining the differences and determining if the best practices should be implemented, or, because of special circumstances, should be ignored.
  - After determining what changes, if any, should be made, test the changes on a test server (in most cases).
  - Roll out the changes to production SQL Servers.
  - Repeat: Important to take a systematic approach.

# SQL Server Health Check Flow Chart



# Where Do The Best Practices Come From

- To compare the data you have collected during your health check, you must have a point of reference (best practices) to determine if your server is “healthy”.
- Ideally, you will have created your own best practices standards guide that you follow for your organization’s SQL Servers. If not, you should create one that acts as your point of reference.
- If you are at the point where you need to create your own best practice standards guide, then look to authoritative resources to begin creating the guide.

# Why Perform a SQL Server Health Check

- Provides documentation and a baseline for:
  - Performance Tuning
  - Troubleshooting
  - Rebuilding, Disaster Recovery
- To identify potential problems & fix them early
- To implement best practices (& help develop your own best practices standards guide). This results in performance optimization and higher availability.
- Help to standardize your SQL Server's configuration throughout your organization

# When Should You Perform a SQL Server Health Check

- If you currently administer any SQL Servers and you have never documented them before.
- If you start a new job, to quickly learn about the SQL Servers you have inherited and now “own”.
- If you are a consultant, and need to get quickly up to speed on your client’s SQL Servers.
- Once an initial health check is performed, it should be repeated regularly to ensure the continued health of your SQL Servers. Follow-up health checks will be much faster because you already have collected the basics.

# What Tools Should You Use to Perform a SQL Server Health Check

- OS tools, such as administrative tools and event logs
- SSMS, including Standard Reports
- T-SQL, PowerShell, DMVs, system views, system stored procedures, etc.
- SQL Trace/Profiler
- Performance Monitor (maybe Data Collector)
- RML Utilities for SQL Server, PAL, & other freeware
- Create your own automated collection, reporting system
- Use vendor application: SCOM, SQL Response, etc.
- Check out the free eBook *SQL Server Tacklebox*

# Where Should the Health Check Data be Stored

- If the number of SQL Servers you manage are few, then collecting and storing the data in a spreadsheet is probably the easiest and quickest way to collect and store the data.
- If you have many SQL Server instances, then you need to automate the health check process and store the data in a database. If you don't have the time to automate your health checks, then doing it manually with a spreadsheet is better than doing nothing at all.

# Things to Keep in Mind When Performing a SQL Server Health Check

- When collecting data for a health check, keep the following in mind:
  - Not collection *enough* data can lead to bad choices
  - Not collecting the *right* data can lead to bad choices
  - Collecting *too much data* sometimes can make lead to the problem of “You can't see the forest for the trees”.
  - *Misinterpreting* the data can lead to bad choices
  - Not *acting* on the data is bad

# Introduction to the SQL Health Check Spreadsheet

- Download the spreadsheet from:  
[www.bradmcgehee.com/healthcheck.zip](http://www.bradmcgehee.com/healthcheck.zip).
- Not all of it applies to every SQL Server instance.
- Even if a check item does apply to you, you may determine that it is unimportant to you.
- Doesn't have to be completed in any special order.
- Not every possible checklist option is listed.
- Modify as necessary to meet your needs.
- Keep spreadsheet updated as changes are made.

# SQL Server Health Check Checklists

- Hardware
- Operating System
- SQL Server Settings
- Database Settings
- Security
- Database Maintenance
- SQL Server Agent Jobs
- Logs
- Monitoring
- Performance (work in progress)
- High Availability (included in other checklists for now)

# Take Aways From This Session

- Obviously, this session has barely scratched the surface of what it takes to perform a complete SQL Server health check.
- Hopefully, I have persuaded you of the importance of performing SQL Server health checks.
- You should also now have an idea of where to start to begin performing your SQL Server health checks.
- When you get back to your office, download the spreadsheet and begin slowly, as you have time, to perform a health check on each of your SQL Servers.

# Q&A

- Please speak up so that others can hear you.
- If I don't have time to answer your questions now, please see me after the session, later today, or you can e-mail me at [bradmcgehee@hotmail.com](mailto:bradmcgehee@hotmail.com).

# E-books, websites, slides & more

- Free E-books on SQL Server:

- [www.sqlservercentral.com/Books](http://www.sqlservercentral.com/Books)

- Check these websites out:

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