

What Health Checks are available with SQL Elements?

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SQL Elements performs Health Checks on your SQL Server instances to alert you about the availability, performance, and other critical issues of your environment.

The following table describes what type of metrics are measured, their status, when alerts are raised, their criticality levels, the collection frequency for each metric, and if email alerts are sent.

Metric	Category	Status	Alert raised when/threshold	Collection Interval	Email Alert
Instance status	Availability	up down	critical: instance down	Runs every half minute	Yes
Instance response time	Availability	response time ok slow response time	warning: 2000 ms critical: 5000 ms	Runs every half minute	Yes
Database status	Availability	normal suspect offline inaccessible emergency mode	critical: suspect, offline, inaccessible, emergency mode	Runs every day	Yes
Database never backed up	Disaster recovery	backed up never backed up	critical: never backed up	Runs every day	No
Database not backed up recently	Disaster recovery	backed up recently in the last 7 days no full backup in 7 days or more no differential backup in 7 days or more	critical: no full backup in 7 days or more warning: no differential backup in 7 days or more	Runs every day	No
Databases with no CHECKDB integrity check	Disaster recovery	CHECKDB never run	critical: CHECKDB never	Runs every day	No
Databases with no recent CHECKDB integrity check	Disaster recovery	run CHECKDB in the last 7 days no recent CHECKDB in more than 7 days no recent CHECKDB in more than 30 days	no recent CHECKDB in more than 7 days no recent CHECKDB in more than 30 days	Runs every day	No
Drives at risk	Storage capacity	below 75 % capacity between 75% and 90% above 90%	warning: between 75% and 90% critical: above 90%, server drive is at risk of being full soon	Runs hourly	Yes
Databases at risk	Storage capacity	below 75 % capacity between 75% and 90% above 90%	warning: between 75% and 90% critical: above 90%	Runs hourly	Yes
Database Auto shrink enabled	Configuration check	enabled disabled	warning: enabled	Runs every day	No
Instance xp_cmdshell enabled	Configuration check	enabled disabled	critical: enabled	Runs every day	No
Database Tempdb files not all the same size	Configuration check	same size not the same size	warning: not the same size	Runs every day	No



Refresh collection

SQL Elements allows you to refresh these metrics at any time from the instance view. For more information about this option, please refer to [Viewing instance information](#).

Definitions

Availability Data

Availability Data refers to the instance status (up or down), instance response time, and database status (normal, suspect, offline, inaccessible or emergency mode).

Capacity data

Capacity data refers to storage capacity of your drivers and databases of your environment. SQL Elements lets you know if your drives or databases are at risk of being full soon.

Configuration Data

The following configuration data is collected:

- **Auto Shrink** SQL Server automatically shrinks databases to remove unused space. In some cases shrinking databases may not be the best option for your environment since it may cause fragmentation. This configuration check allows you to know if the Auto Shrink option is enabled or disabled.
- **Xp_cmdshell** Xp_cmdshell is essentially a mechanism to execute arbitrary calls into the system using either the SQL Server context (i.e. the Windows account used to start the service) or a proxy account that can be configured to execute xp_cmdshell using different credentials. When xp_cmdshell is enabled, the user could escalate his/her privileges to sysadmin. It is important to be aware which instances have the xp_cmdshell option enabled for security reasons. This configuration check allows you to know if xp_cmdshell is enabled or disabled in an instance.
- **Tempdb files** It is important to configure the files at the same initial size and with the same growth settings so SQL Server can write the data across the files as evenly as possible. The data files for tempdb should all be the same size and large enough to handle the workload of 24 hours a day. This helps SQL Server distribute the work evenly across the tempdb data files. This configuration check allows you to know if tempdb files are the same size or not.

Disaster recovery

Disaster recovery is a process to help you recover information if disaster occurs. Disaster recovery planning refers to the preparation that must occur in response to a disaster. SQL elements provides Health Checks that give you information of your latest backups, alerting you if any of your databases have not been backed up recently.

CHECKDB Checks the logical and physical integrity of all the objects in the specified database. If corruption has occurred for any reason, the DBCC CHECKDB command will find it, and tell you exactly where the problem is.

For more term definitions, refer to [Definition of terms](#).