

Microsoft Server 2016 file management



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Outline

❖ Introduction

❖ Database Files

- File Initialization
- File-groups
- Database engine
- Memory Architecture
- File States
- SQL Server Data Files in Microsoft Azure

❖ Conclusions

Introduction

- ❖ Database Instant File Initialization.
- ❖ Database Files and File groups.
- ❖ Improved database engine.
- ❖ Memory Architecture.
- ❖ File States.
- ❖ SQL Server Data Files in Microsoft Azure.

Introduction

- ❖ Commonly, Microsoft management system :
 - Stable power-efficient gain.
 - Best frequency limit of operation.
 - Lower power consumption.

Problem

SQL Server Performance and file management.

Initialization

- ❖ Space is allocated for the data file but no zeroes are written.
- ❖ Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service selection.
- ❖ Grant the right to the service account at a such time.

Types of files

- ❖ **Primary data files:** The primary data file is the starting point of the database and points to the other files in the database. Every database has one primary data file.
- ❖ **Secondary data files:** Make up all the data files, other than the primary data file.
- ❖ **Log files:** Log files hold all the log information that is used to recover the database.

New in SQL Server 2016

- ❖ Gain real time insights across your transactional.
- ❖ Analytical data with a scalable database platform.
- ❖ Increasing of the power and productivity of architects, developers, and administrators who design, develop, and maintain data storage systems.
- ❖ Instance of the Database Engine: a copy of the sqlservr.exe executable that runs as an operating system service.

Balance Between Two goals

- ❖ Keep the buffer pool from becoming so big that the entire system is low on memory.
- ❖ Minimize physical I/O to the database files by maximizing the size of the buffer pool.

Definitions

- ❖ **ONLINE:** Availability for all operations, Files in the primary filegroup online the database is online, a file in the primary filegroup is not online,the database is not online.
- ❖ **OFFLINE:** The file is not available for access and may not be present on the disk, Files are offline by explicit user action and remain offline until additional user action is taken.
- ❖ **RESTORING:** Files enter the restoring state because of a restore command affecting the whole file, not just a page restore, and remain in this state until the restore is completed and the file is recovered.

Definitions

- ❖ **RECOVERY PENDING:** A file enters this state automatically because of a piecemeal restore process in which the file is not restored and recovered.
- ❖ **SUSPECT:** Recovery of the file failed during an online restore process. If the file is in the primary filegroup, the database is also marked as suspect.
- ❖ **DEFUNCT:** The file was dropped when it was not online. All files in a filegroup become defunct when an offline filegroup is removed.

Why Use It

- ❖ Easy and fast migration benefits.
- ❖ Cost and limitless storage benefits.
- ❖ High availability and disaster recovery benefits.
- ❖ Security benefits.
- ❖ Snapshot backup.

Azure Storage Concepts

- ❖ Azure storage account represents the highest level of the namespace for accessing Blobs.
- ❖ A storage account can contain an unlimited number of containers, as long as their total size is under 500 TB.
- ❖ A container provides a grouping of a set of Blobs.
- ❖ A container can store an unlimited number of Blobs as well.

Conclusions

- ❖ An sql sever 2016 file management is presented .
 - Data file location is presented.
 - Primary, secondary, and long data files are explained.
 - Explanation of increasing of power and productivity of architects developers, and administrators.
 - File States definitions are presented.
- ❖ Server Data Files in Microsoft Azure.
 - Explanation reasons for Using SQL Server Data Files in Microsoft Azure.
 - Azure Storage Concepts are presented.

Thank You For Your Attention