**Backup Chain extract script-SQL Server – Author:** [**Brahmanand Shukla**](https://www.sqlservercentral.com/author/brahmanand-shukla)

**Source:** <https://www.sqlservercentral.com/scripts/t-sql-query-to-get-the-latest-available-backup-chain>

This query shall return the latest available database backup chain (Full, Differential and Log) of individual databases along with their backup size and compressed size on the SQL Server instance. Output shall also include the total backup size, total compressed size of all the Full backups, Differential backups, Log backups and Total Full + Differential + Log backups.

This query can be helpful for knowing the latest backup chain and size of the backups for the capacity planning and also to estimate the space requirement for database restore.

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Date : 28-Oct-2019

Purpose : T-SQL query to get the latest available backup chain

\*/

DECLARE @server\_name VARCHAR(50) = 'ALL'

, @database\_name VARCHAR(50) = 'ALL'

-- Uncomment the below section and supply your <server name> if you want to fetch the report for specific server

--SET @server\_name = 'sql\_server\_1'

-- Uncomment the below section and supply your <database name> if you want to fetch the report for specific database

--SET @database\_name = 'sql\_database\_1'

; WITH cte\_Backup

AS

(

SELECT backupset.server\_name

, backupset.database\_name

, backupset.backup\_start\_date

, backupset.backup\_finish\_date

,

CASE backupset.type

WHEN 'D' THEN 'Full'

WHEN 'I' THEN 'Differential'

WHEN 'L' THEN 'Log'

END AS [backup\_type]

, CAST(((backupset.backup\_size / 1024) / 1024) AS NUMERIC(18, 2)) AS [Backup\_size\_MB]

, CAST(((backupset.compressed\_backup\_size / 1024) / 1024) AS NUMERIC(18, 2)) AS [Compressed\_Backup\_size\_MB]

, DATEDIFF(SECOND, backupset.backup\_start\_date, backupset.backup\_finish\_date) AS [Duration\_Seconds]

, backupset.database\_creation\_date

, backupset.recovery\_model

, backupmediafamily.physical\_device\_name

, backupset.[user\_name]

, backupset.[backup\_set\_uuid]

, backupset.[database\_backup\_lsn]

, backupset.[differential\_base\_guid]

, ROW\_NUMBER() OVER(PARTITION BY backupset.server\_name, backupset.database\_name, backupset.type

ORDER BY backupset.backup\_finish\_date DESC) AS [RowID]

,

CASE backupset.type

WHEN 'D' THEN 1

WHEN 'I' THEN 2

WHEN 'L' THEN 3

END AS [backup\_type\_sort\_order]

FROM msdb.dbo.backupmediafamily backupmediafamily

INNER JOIN msdb.dbo.backupset backupset

ON backupmediafamily.media\_set\_id = backupset.media\_set\_id

WHERE (@server\_name = 'ALL' OR backupset.server\_name = @server\_name)

AND (@database\_name = 'ALL' OR backupset.database\_name = @database\_name)

)

, cte\_Backup\_Full

AS

(

SELECT \*

FROM cte\_Backup

WHERE [backup\_type] = 'Full'

AND [RowID] = 1

)

, cte\_Backup\_Differential

AS

(

SELECT DIF.[server\_name]

, DIF.[database\_name]

, DIF.[backup\_start\_date]

, DIF.[backup\_finish\_date]

, DIF.[backup\_type]

, DIF.[Backup\_size\_MB]

, DIF.[Compressed\_Backup\_size\_MB]

, DIF.[Duration\_Seconds]

, DIF.[database\_creation\_date]

, DIF.[recovery\_model]

, DIF.[physical\_device\_name]

, DIF.[user\_name]

, DIF.[backup\_type\_sort\_order]

, DIF.[database\_backup\_lsn]

, ROW\_NUMBER() OVER(PARTITION BY DIF.[server\_name], DIF.[database\_name], DIF.[differential\_base\_guid]

ORDER BY DIF.[backup\_finish\_date] DESC) AS [RowID]

FROM cte\_Backup DIF

INNER JOIN cte\_Backup\_Full FUL

ON FUL.[server\_name] = DIF.[server\_name]

AND FUL.[database\_name] = DIF.[database\_name]

AND FUL.[backup\_set\_uuid] = DIF.[differential\_base\_guid]

WHERE DIF.[backup\_type] = 'Differential'

AND DIF.[backup\_finish\_date] > FUL.[backup\_finish\_date]

)

, cte\_Backup\_Log

AS

(

SELECT AL.\*

FROM cte\_Backup AL

INNER JOIN cte\_Backup\_Differential DIF

ON DIF.[server\_name] = AL.[server\_name]

AND DIF.[database\_name] = AL.[database\_name]

AND DIF.[database\_backup\_lsn] = AL.[database\_backup\_lsn]

WHERE DIF.[RowID] = 1

AND AL.[backup\_type] = 'Log'

AND AL.[backup\_finish\_date] > DIF.[backup\_finish\_date]

)

, cte\_Backup\_Chain

AS

(

SELECT [server\_name]

, [database\_name]

, [backup\_start\_date]

, [backup\_finish\_date]

, [backup\_type]

, [Backup\_size\_MB]

, [Compressed\_Backup\_size\_MB]

, [Duration\_Seconds]

, [database\_creation\_date]

, [recovery\_model]

, [physical\_device\_name]

, [user\_name]

, [backup\_type\_sort\_order]

FROM cte\_Backup\_Full

UNION ALL

SELECT [server\_name]

, [database\_name]

, [backup\_start\_date]

, [backup\_finish\_date]

, [backup\_type]

, [Backup\_size\_MB]

, [Compressed\_Backup\_size\_MB]

, [Duration\_Seconds]

, [database\_creation\_date]

, [recovery\_model]

, [physical\_device\_name]

, [user\_name]

, [backup\_type\_sort\_order]

FROM cte\_Backup\_Differential

WHERE [RowID] = 1

UNION ALL

SELECT [server\_name]

, [database\_name]

, [backup\_start\_date]

, [backup\_finish\_date]

, [backup\_type]

, [Backup\_size\_MB]

, [Compressed\_Backup\_size\_MB]

, [Duration\_Seconds]

, [database\_creation\_date]

, [recovery\_model]

, [physical\_device\_name]

, [user\_name]

, [backup\_type\_sort\_order]

FROM cte\_Backup\_Log

)

, cte\_Backup\_Full\_All\_DB

AS

(

SELECT [server\_name]

, 'ALL\_FULL' AS [database\_name]

, NULL AS [backup\_start\_date]

, NULL AS [backup\_finish\_date]

, NULL AS [backup\_type]

, SUM([Backup\_size\_MB]) AS [Backup\_size\_MB]

, SUM([Compressed\_Backup\_size\_MB]) AS [Compressed\_Backup\_size\_MB]

, SUM([Duration\_Seconds]) AS [Duration\_Seconds]

, NULL AS [database\_creation\_date]

, NULL AS [recovery\_model]

, NULL AS [physical\_device\_name]

, NULL AS [user\_name]

, 0 AS [backup\_type\_sort\_order]

FROM cte\_Backup\_Chain

WHERE [backup\_type] = 'Full'

GROUP BY [server\_name]

)

, cte\_Backup\_Differential\_All\_DB

AS

(

SELECT [server\_name]

, 'ALL\_DIFF' AS [database\_name]

, NULL AS [backup\_start\_date]

, NULL AS [backup\_finish\_date]

, NULL AS [backup\_type]

, SUM([Backup\_size\_MB]) AS [Backup\_size\_MB]

, SUM([Compressed\_Backup\_size\_MB]) AS [Compressed\_Backup\_size\_MB]

, SUM([Duration\_Seconds]) AS [Duration\_Seconds]

, NULL AS [database\_creation\_date]

, NULL AS [recovery\_model]

, NULL AS [physical\_device\_name]

, NULL AS [user\_name]

, 0 AS [backup\_type\_sort\_order]

FROM cte\_Backup\_Chain

WHERE [backup\_type] = 'Differential'

GROUP BY [server\_name]

)

, cte\_Backup\_Log\_All\_DB

AS

(

SELECT [server\_name]

, 'ALL\_LOG' AS [database\_name]

, NULL AS [backup\_start\_date]

, NULL AS [backup\_finish\_date]

, NULL AS [backup\_type]

, SUM([Backup\_size\_MB]) AS [Backup\_size\_MB]

, SUM([Compressed\_Backup\_size\_MB]) AS [Compressed\_Backup\_size\_MB]

, SUM([Duration\_Seconds]) AS [Duration\_Seconds]

, NULL AS [database\_creation\_date]

, NULL AS [recovery\_model]

, NULL AS [physical\_device\_name]

, NULL AS [user\_name]

, 0 AS [backup\_type\_sort\_order]

FROM cte\_Backup\_Chain

WHERE [backup\_type] = 'Log'

GROUP BY [server\_name]

)

, cte\_Backup\_Full\_Differential\_Log\_All\_DB

AS

(

SELECT [server\_name]

, 'FULL+DIFF+LOG' AS [database\_name]

, NULL AS [backup\_start\_date]

, NULL AS [backup\_finish\_date]

, NULL AS [backup\_type]

, SUM([Backup\_size\_MB]) AS [Backup\_size\_MB]

, SUM([Compressed\_Backup\_size\_MB]) AS [Compressed\_Backup\_size\_MB]

, SUM([Duration\_Seconds]) AS [Duration\_Seconds]

, NULL AS [database\_creation\_date]

, NULL AS [recovery\_model]

, NULL AS [physical\_device\_name]

, NULL AS [user\_name]

, 0 AS [backup\_type\_sort\_order]

FROM cte\_Backup\_Chain

GROUP BY [server\_name]

)

, cte\_Final\_Output\_Staging

AS

(

SELECT [server\_name]

, [database\_name]

, [backup\_start\_date]

, [backup\_finish\_date]

, [backup\_type]

, [Backup\_size\_MB]

, [Compressed\_Backup\_size\_MB]

, [Duration\_Seconds]

, [database\_creation\_date]

, [recovery\_model]

, [physical\_device\_name]

, [user\_name]

, [backup\_type\_sort\_order]

, 1 AS [sort\_priority]

FROM cte\_Backup\_Full\_All\_DB

UNION ALL

SELECT [server\_name]

, [database\_name]

, [backup\_start\_date]

, [backup\_finish\_date]

, [backup\_type]

, [Backup\_size\_MB]

, [Compressed\_Backup\_size\_MB]

, [Duration\_Seconds]

, [database\_creation\_date]

, [recovery\_model]

, [physical\_device\_name]

, [user\_name]

, [backup\_type\_sort\_order]

, 2 AS [sort\_priority]

FROM cte\_Backup\_Differential\_All\_DB

UNION ALL

SELECT [server\_name]

, [database\_name]

, [backup\_start\_date]

, [backup\_finish\_date]

, [backup\_type]

, [Backup\_size\_MB]

, [Compressed\_Backup\_size\_MB]

, [Duration\_Seconds]

, [database\_creation\_date]

, [recovery\_model]

, [physical\_device\_name]

, [user\_name]

, [backup\_type\_sort\_order]

, 3 AS [sort\_priority]

FROM cte\_Backup\_Log\_All\_DB

UNION ALL

SELECT [server\_name]

, [database\_name]

, [backup\_start\_date]

, [backup\_finish\_date]

, [backup\_type]

, [Backup\_size\_MB]

, [Compressed\_Backup\_size\_MB]

, [Duration\_Seconds]

, [database\_creation\_date]

, [recovery\_model]

, [physical\_device\_name]

, [user\_name]

, [backup\_type\_sort\_order]

, 4 AS [sort\_priority]

FROM cte\_Backup\_Full\_Differential\_Log\_All\_DB

UNION ALL

SELECT [server\_name]

, [database\_name]

, [backup\_start\_date]

, [backup\_finish\_date]

, [backup\_type]

, [Backup\_size\_MB]

, [Compressed\_Backup\_size\_MB]

, [Duration\_Seconds]

, [database\_creation\_date]

, [recovery\_model]

, [physical\_device\_name]

, [user\_name]

, [backup\_type\_sort\_order]

, (4 + [backup\_type\_sort\_order]) AS [sort\_priority]

FROM cte\_Backup\_Chain

)

SELECT [server\_name]

, [database\_name]

, [backup\_start\_date]

, [backup\_finish\_date]

, [backup\_type]

, [Backup\_size\_MB]

, [Compressed\_Backup\_size\_MB]

, [Duration\_Seconds]

, [database\_creation\_date]

, [recovery\_model]

, [physical\_device\_name]

, [user\_name]

FROM cte\_Final\_Output\_Staging

ORDER BY ROW\_NUMBER() OVER(ORDER BY [sort\_priority] ASC, [database\_name] ASC, [backup\_type\_sort\_order] ASC, [backup\_finish\_date] ASC)