--Summary: Short snapshot of I/O latencies (uses WAITFOR DELAY '00:10:00';)

IF EXISTS (SELECT \* FROM [tempdb].[sys].[objects]

WHERE [name] = N'##IOStats1')

DROP TABLE [##IOStats1];

IF EXISTS (SELECT \* FROM [tempdb].[sys].[objects]

WHERE [name] = N'##IOStats2')

DROP TABLE [##IOStats2];

GO

SELECT [database\_id], [file\_id], [num\_of\_reads], [io\_stall\_read\_ms],

[num\_of\_writes], [io\_stall\_write\_ms], [io\_stall],

[num\_of\_bytes\_read], [num\_of\_bytes\_written], [file\_handle]

INTO ##IOStats1

FROM sys.dm\_io\_virtual\_file\_stats (NULL, NULL);

GO

WAITFOR DELAY '00:10:00';

GO

SELECT [database\_id], [file\_id], [num\_of\_reads], [io\_stall\_read\_ms],

[num\_of\_writes], [io\_stall\_write\_ms], [io\_stall],

[num\_of\_bytes\_read], [num\_of\_bytes\_written], [file\_handle]

INTO ##IOStats2

FROM sys.dm\_io\_virtual\_file\_stats (NULL, NULL);

GO

WITH [DiffLatencies] AS

(SELECT

-- Files that weren't in the first snapshot

[ts2].[database\_id],

[ts2].[file\_id],

[ts2].[num\_of\_reads],

[ts2].[io\_stall\_read\_ms],

[ts2].[num\_of\_writes],

[ts2].[io\_stall\_write\_ms],

[ts2].[io\_stall],

[ts2].[num\_of\_bytes\_read],

[ts2].[num\_of\_bytes\_written]

FROM [##IOStats2] AS [ts2]

LEFT OUTER JOIN [##IOStats1] AS [ts1]

ON [ts2].[file\_handle] = [ts1].[file\_handle]

WHERE [ts1].[file\_handle] IS NULL

UNION

SELECT

-- Diff of latencies in both snapshots

[ts2].[database\_id],

[ts2].[file\_id],

[ts2].[num\_of\_reads] - [ts1].[num\_of\_reads] AS [num\_of\_reads],

[ts2].[io\_stall\_read\_ms] - [ts1].[io\_stall\_read\_ms] AS [io\_stall\_read\_ms],

[ts2].[num\_of\_writes] - [ts1].[num\_of\_writes] AS [num\_of\_writes],

[ts2].[io\_stall\_write\_ms] - [ts1].[io\_stall\_write\_ms] AS [io\_stall\_write\_ms],

[ts2].[io\_stall] - [ts1].[io\_stall] AS [io\_stall],

[ts2].[num\_of\_bytes\_read] - [ts1].[num\_of\_bytes\_read] AS [num\_of\_bytes\_read],

[ts2].[num\_of\_bytes\_written] - [ts1].[num\_of\_bytes\_written] AS [num\_of\_bytes\_written]

FROM [##IOStats2] AS [ts2]

LEFT OUTER JOIN [##IOStats1] AS [ts1]

ON [ts2].[file\_handle] = [ts1].[file\_handle]

WHERE [ts1].[file\_handle] IS NOT NULL)

SELECT

DB\_NAME ([vfs].[database\_id]) AS [DB],

LEFT ([mf].[physical\_name], 2) AS [Drive],

[mf].[type\_desc],

[num\_of\_reads] AS [Reads],

[num\_of\_writes] AS [Writes],

[ReadLatency(ms)] =

CASE WHEN [num\_of\_reads] = 0

THEN 0 ELSE ([io\_stall\_read\_ms] / [num\_of\_reads]) END,

[WriteLatency(ms)] =

CASE WHEN [num\_of\_writes] = 0

THEN 0 ELSE ([io\_stall\_write\_ms] / [num\_of\_writes]) END,

/\*[Latency] =

CASE WHEN ([num\_of\_reads] = 0 AND [num\_of\_writes] = 0)

THEN 0 ELSE ([io\_stall] / ([num\_of\_reads] + [num\_of\_writes])) END,\*/

[AvgBPerRead] =

CASE WHEN [num\_of\_reads] = 0

THEN 0 ELSE ([num\_of\_bytes\_read] / [num\_of\_reads]) END,

[AvgBPerWrite] =

CASE WHEN [num\_of\_writes] = 0

THEN 0 ELSE ([num\_of\_bytes\_written] / [num\_of\_writes]) END,

/\*[AvgBPerTransfer] =

CASE WHEN ([num\_of\_reads] = 0 AND [num\_of\_writes] = 0)

THEN 0 ELSE

(([num\_of\_bytes\_read] + [num\_of\_bytes\_written]) /

([num\_of\_reads] + [num\_of\_writes])) END,\*/

[mf].[physical\_name]

FROM [DiffLatencies] AS [vfs]

JOIN sys.master\_files AS [mf]

ON [vfs].[database\_id] = [mf].[database\_id]

AND [vfs].[file\_id] = [mf].[file\_id]

-- ORDER BY [ReadLatency(ms)] DESC

ORDER BY [WriteLatency(ms)] DESC;

GO

-- Cleanup

IF EXISTS (SELECT \* FROM [tempdb].[sys].[objects]

WHERE [name] = N'##IOStats1')

DROP TABLE [##IOStats1];

IF EXISTS (SELECT \* FROM [tempdb].[sys].[objects]

WHERE [name] = N'##IOStats2')

DROP TABLE [##IOStats2];

GO