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| |  | | --- | | General SOP for Troubleshooting Disk space alert  General Procedure  Check the current disk space on server  Check to see if there is any scope for releasing the space on drives by shrinking the space from the free space left in  datafiles.  If so, gather the information and send it to Customer and ask for an approval if we can shrink the files and  also, the maintenance window.  Check to see if there are any old backup files or other files that can be deleted to release the space  after confirming from Customer and getting the approval.  If there is no scope to release space either by shrinking or deleting old datafiles,  please Update or Escalate to the Customer to add more space to the drive.    Log onto SQL Instance with SSMS  Check if the disk is dedicated for Log or Data files, first try to execute below command and replace with Drive letter.  For an example, we have filter with L-Drive  Select \* from sysaltfiles where filename like '%L:%'  From above query we can list of data and log files resides on drive.  Check Database Transaction Log file space  Most of time we get disk space alerts regarding SQL server running out of disk space due to transaction logs, in that case try to run below queries.  Run DBCC command to find out the database whose log space used percentage is the lowest and log size if the largest.  DBCC SQLPERF(LOGSPACE)  From below query will find log wait for database.  SELECT [Name],[log\_reuse\_wait\_desc] FROM [master].[sys].[databases] WHERE [name] = N'DatabaseName';    The log file is full due to T-log backups are not scheduled or Backup is failing due to disk space.  Please run below query to check latest Log backups  SELECT x.database\_name, z.physical\_device\_name,  CONVERT(char(20), x.backup\_finish\_date, 108) FinishTime, x.backup\_finish\_date  from msdb.dbo.backupset x  join ( SELECT a.database\_name, max(a.backup\_finish\_date) backup\_finish\_date  FROM msdb.dbo.backupset a  WHERE type = 'L'  GROUP BY a.database\_name ) y on x.database\_name = y.database\_name  and x.backup\_finish\_date = y.backup\_finish\_date  JOIN msdb.dbo.backupmediafamily z ON x.media\_set\_id = z.media\_set\_id  If Log file is 100 % used, then try to take Log backup  Note: If database involved in Log shipping make sure T-Log backup job.  To shrink Log file, we can use below query  Use database\_name  Dbcc shrinkfile(Logical\_name, size need to shrink in MB)  Example: DBCC SHRINKFILE (2,1024)  Check Current database size and free space available on the server  Below query gives current data file size and how much free space available on each file.  Check if we have any free space available on Drive  Note: Don't shrink data file it leads to fragmentation on database. We can check with client if we can shrink data file in maintenance window or add more disk space on Data Drive.  use master  GO  IF OBJECT\_ID('tempdb.dbo.##filestats') IS NOT NULL DROP TABLE ##filestats  CREATE TABLE ##filestats(Fileid int,FileGroup int,TotalSpace int,UsedSpace int,FreeSpace int,Name varchar(100),FileName varchar(100))  Exec sp\_MSforeachDB  @command1 = 'Use [?];Insert ##filestats (Fileid, FileGroup, TotalSpace,UsedSpace, Name, FileName) exec (''DBCC SHOWFILESTATS WITH TABLERESULTS'')'  UPDATE ##filestats set totalspace = totalspace\*64/1024, usedspace =usedspace\*64/1024  UPDATE ##filestats set freespace = totalspace - usedspace  SELECT  db\_name(dbid) AS DBNAME  ,Spaceinperc = (fs.freespace\*100/fs.totalspace)  ,fs.TotalSpace AS TotalSpaceinMB  ,fs.UsedSpace AS UsedSpaceinMB  ,fs.FreeSpace AS FreeSpaceinMB  ,fs.Filename  ,fs.name AS FileGroup  FROM ##filestats fs  JOIN sysaltfiles sf  ON fs.filename=sf.filename  Sample Output:      Update the ticket with the details what you have found  Hello team,  We received a P2 alert related to low disk space on <Server>  Upon investigating, we found that the space is occupied by <file> which are <SQL Full\ Log\ Diff>  We were able to release the space by following below steps  <step 1>  <step 2>  Also we verified with low disk space all available database and high database availability  <logshipping\Replication\DB Mirroring> are working as expected. If unable to release the space and need to add space or something like downtime then u need to inform about  The situation to client and update the ticket and change the ticket into ticket status to waiting for customer.  And try to reach the customer over email or phone or teams or in any possible medium. And finally bring the issue to end.  Thank You  < insert your email signature> | |
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Billable Time Standards

The standard Billable Time allowed for Disk space alert is 30 minutes.

If advanced troubleshooting is required to determine if the existing space used by the server the DBA may add up to 30 minutes additional Billable Time

**Note**: Update the SOP with Few cases after approval.