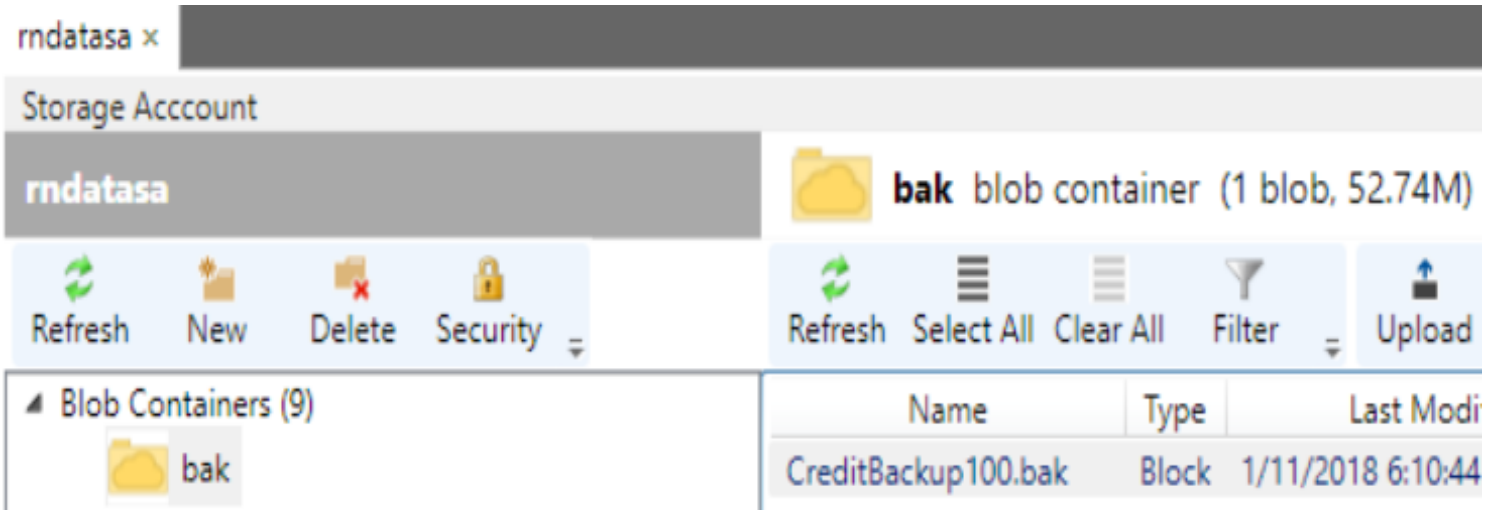
Restore bak file from Blob URL

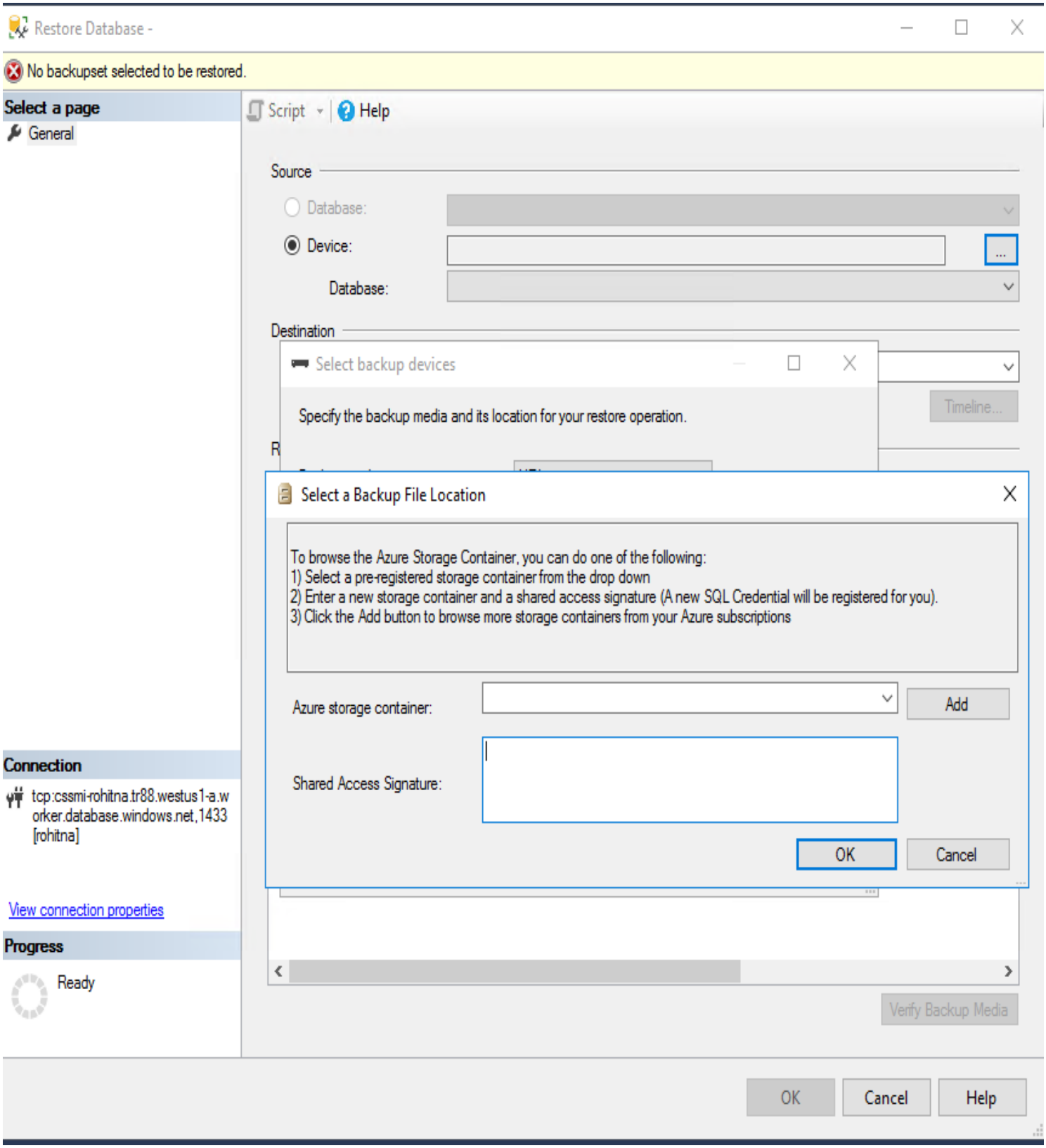
Last updated by | Radhika Shah | Oct 18, 2022 at 2:52 PM PDT

For moving data from on-premises to MI create a full backup of the database and move to blob storage using a tool like Azure Storage Explorer

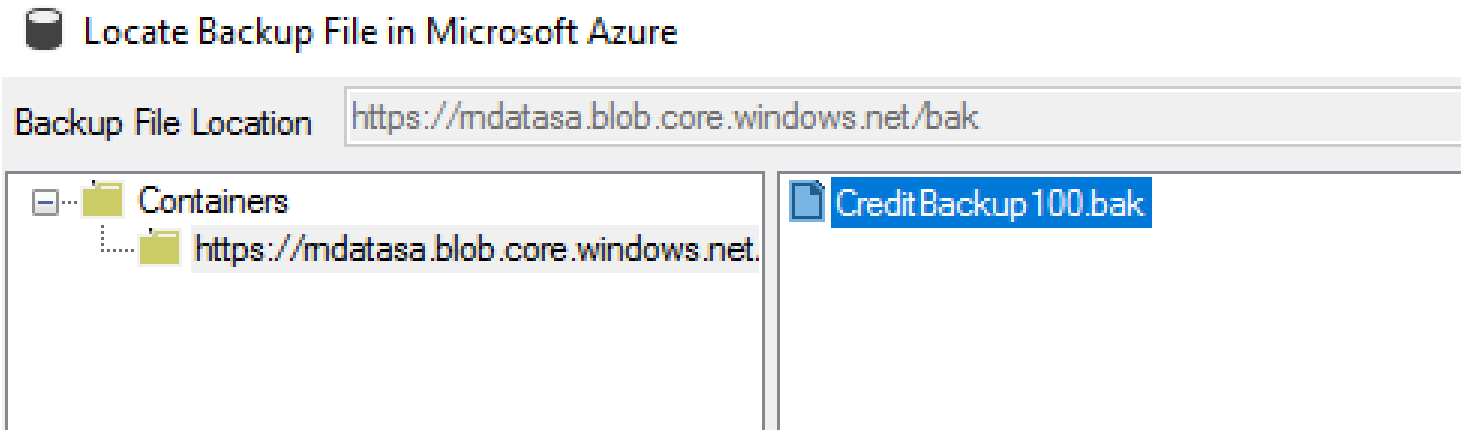
Restore from SSMS UI



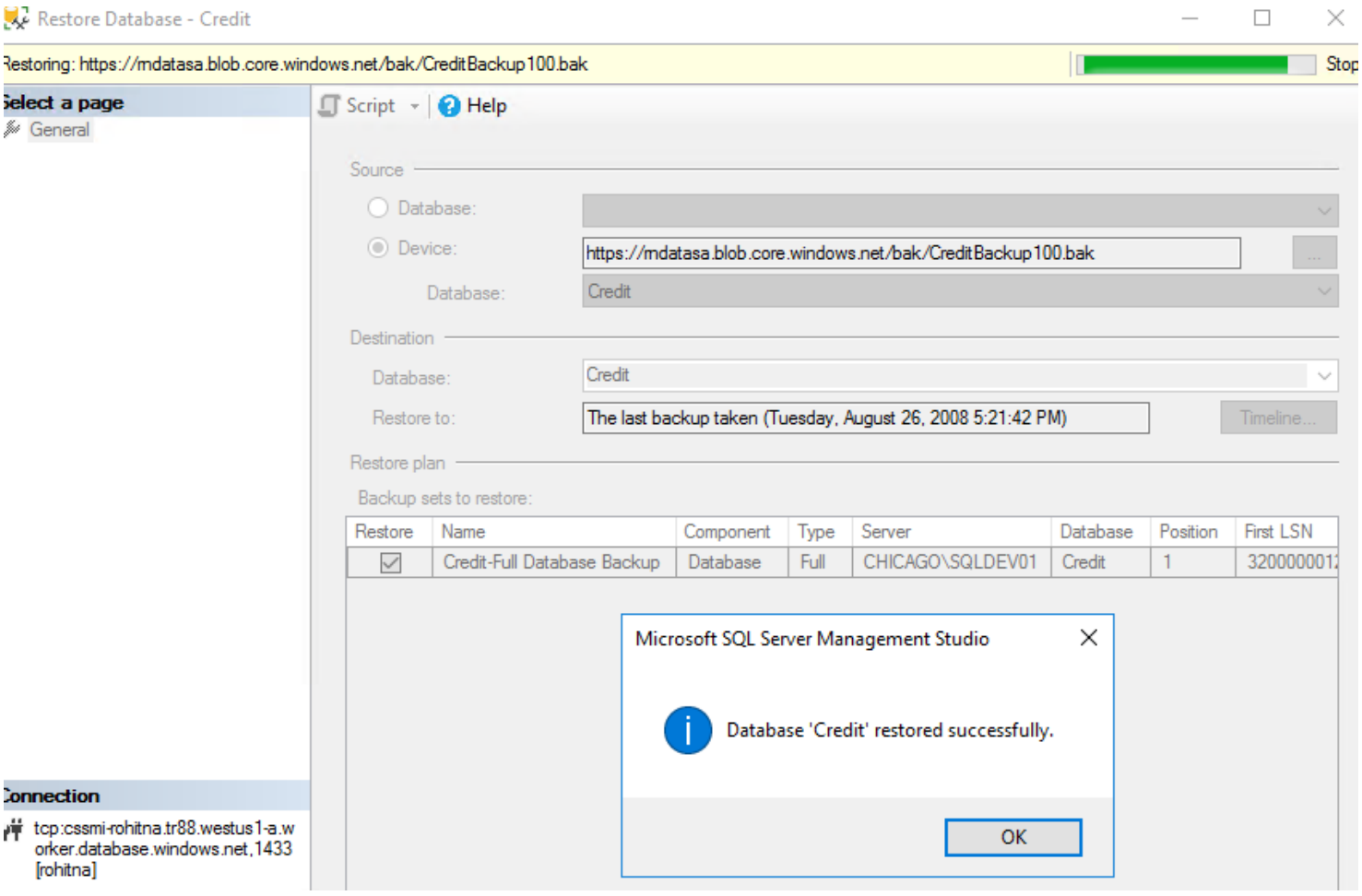
Connect to MI and go to the Restore workflow that allows you to specify a URL



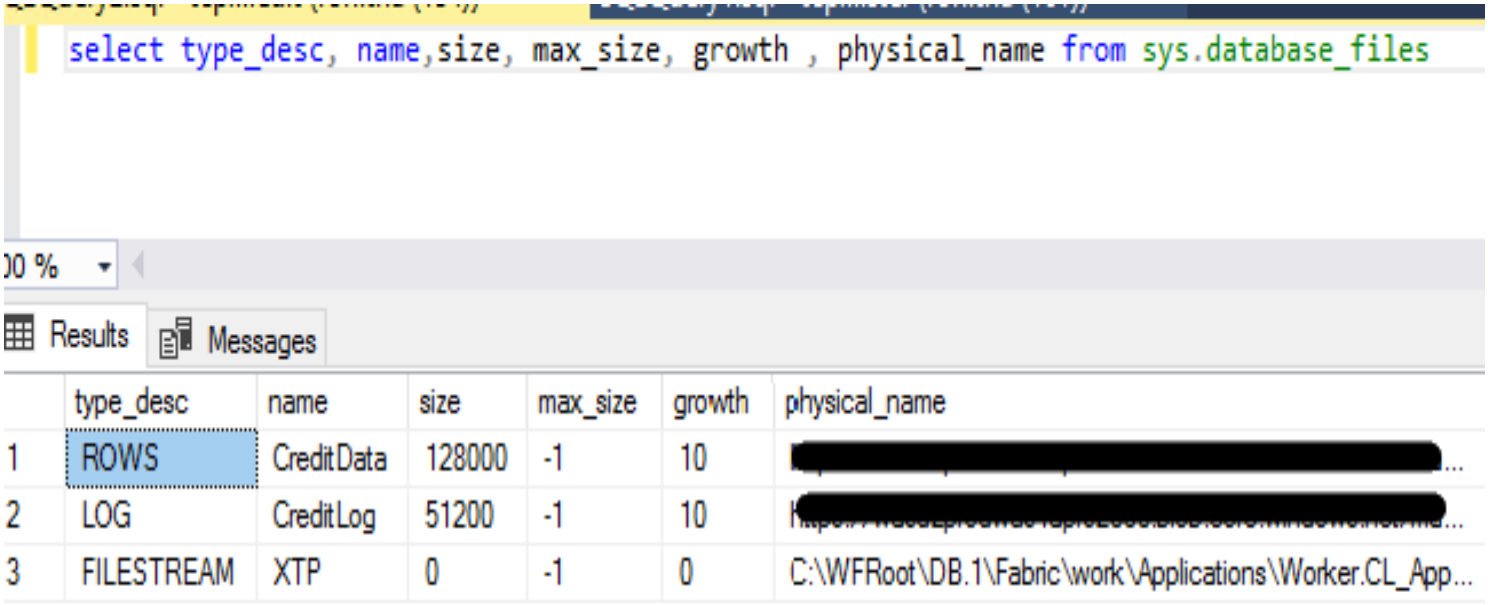
And pick the bak file



And you will see progress messages like this



Run a simple query like this against sys.database_files



```
select type_desc, name,size, max_size, growth , physical_name from sys.database_files
```

00 %

Results | Messages

	type_desc	name	size	max_size	growth	physical_name
1	ROWS	CreditData	128000	-1	10	[redacted]...
2	LOG	CreditLog	51200	-1	10	[redacted]...
3	FILESTREAM	XTP	0	-1	0	C:\WFRoot\DB.1\Fabric\work\Applications\Worker.CL_App...

Restore using T-SQL

1.

https://docs.microsoft.com/en-us/sql/relational-databases/backup-restore/sql-server-backup-to-url

--Step 1- Create credential if not exists

1. CREATE CREDENTIAL [https://pocappointmentmanager709.blob.core.windows.net/eambackup]

WITH IDENTITY = 'SHARED ACCESS SIGNATURE',

SECRET = 'st=2018-01-22T18%3A39%3A00Z&se=2018-01-23T18%3A39%3A00Z&sp=rl&sv=2017-04-17&sr=b&sig=zH9M8ndiT4Ipp7TcGV1%2BJTxUzO9KjQ0SCz450v8T4VM%3D

RESTORE DATABASE dbname

FROM URL = 'https://pocappointmentmanager709.blob.core.windows.net/eambackup/eam_Single_Filegroup.bak'

Common Errors:-

Msg 41915, Level 16, State 1, Line 20

Memory-optimized filegroup must be empty in order to be restored on General Purpose tier of SQL Database Managed Instance.

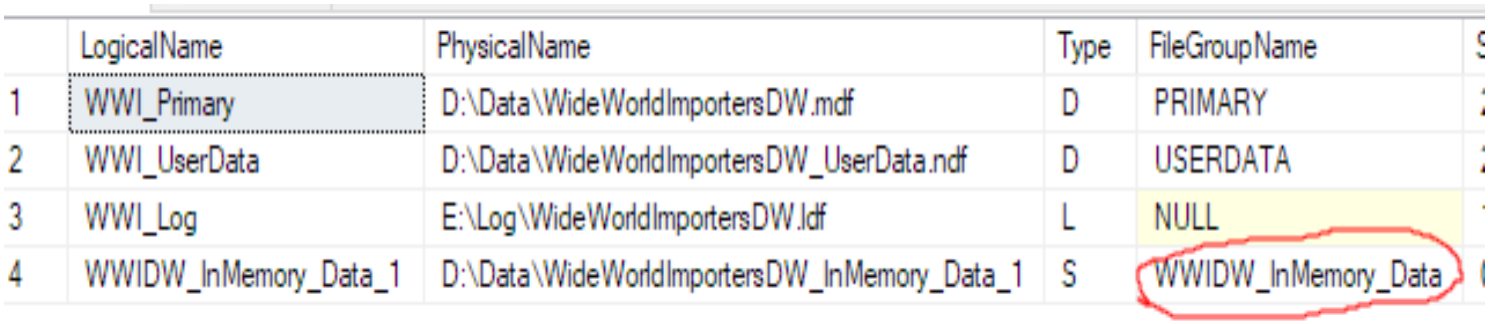
Msg 3013, Level 16, State 1, Line 20

RESTORE DATABASE is terminating abnormally.

Show the customer that his database backup has In memory file via

RESTORE FILELISTONLY

FROM URL = '...



	LogicalName	PhysicalName	Type	FileGroupName	S
1	WWI_Primary	D:\Data\WideWorldImportersDW.mdf	D	PRIMARY	
2	WWI_UserData	D:\Data\WideWorldImportersDW_UserData.ndf	D	USERDATA	
3	WWI_Log	E:\Log\WideWorldImportersDW.ldf	L	NULL	
4	WWIDW_InMemory_Data_1	D:\Data\WideWorldImportersDW_InMemory_Data_1	S	WWIDW_InMemory_Data	

Msg 3201, Level 16, State 2, Line 5

Cannot open backup device 'https://pocappointmentmanager709.blob.core.windows.net/eambackup/eam_Single_Filegroup.bak'. Operating system error 1117(The request could not be performed because of an I/O device error.).

Msg 3013, Level 16, State 1, Line 5

RESTORE DATABASE is terminating abnormally

Customers would try a restore which can fail with the above error:

==> Take a look at the way they created the credential with the SAS token, most likely the SAS Token would have expired.

Eg:- If you look at the SAS key:

the SAS key se=2018-01-23T18%3A39%3A00Z&sp=rl&sv=2017-04-17 [**se is end time for the SAS token],** it should have expired earlier than when the command was issue.

NOTE:-

You do not need the WITH CREDENTIAL option for the restore command. That is a different type of syntax.

By creating the shared access signature credential SQL Server now has access to the storage container.

Error when restoring database :

restore [customer] database

message 3013 level 16 state 1 row 15

RESTORE DATABASE is terminating abnormally.

message 1105 level 17 state 1 row 15

Could not allocate space for object 'sys.sysschobjs'.'nc2' in database 'customer' because the 'PRIMARY' filegroup is full. Create disk space by deleting unneeded files, dropping objects in the filegroup, adding additional files to the filegroup, or setting autogrowth on for existing files in the filegroup.

RESTORE DATABASE is terminating abnormally.

OR

restore [customer] database

message 3013 level 16 state 1 row 15

RESTORE DATABASE is terminating abnormally.

message 1101 level 17 state 1 row 15

Could not allocate a new page for database 'customer' because of insufficient disk space in filegroup 'PRIMARY'. Create the necessary space by dropping objects in the filegroup, adding additional files to the filegroup, or setting autogrowth on for existing files in the filegroup.

==> Check if the file size is limited or autogrowth for the database they are trying to restore is turned off. If they are migrating from on-prem, they should take another backup, but first either:

- resize the files to give them space to growth
- allow them to grow automatically

and then restore to MI from that backup

ICM Reference: https://portal.microsofticm.com/imp/v3/incidents/details/320036308/home

Memory-optimized filegroup must be empty in order to be restored on General Purpose tier of SQL Database Managed Instance.

Msg 3013, Level 16, State 1, Line 20

RESTORE DATABASE is terminating abnormally.

Msg 3201, Level 16, State 2, Line 7

Cannot open backup device 'https://nedevplatstorage.blob.core.windows.net/nedevplatdbstorage/QA1AZRMSSQL16.bak'. Operating system error 86(The specified network password is not correct.).

Msg 3013, Level 16, State 1, Line 7

RESTORE FILELIST is terminating abnormally

have come across this suggestion for same error on MSDN link:

“You must log into Azure first to pass the appropriate credentials.

In SSMS right click the database and select restore. Choose device as source and then choose URL as the backup media type. This will prompt you to login into Azure. Once logged into Azure your script will run assuming your syntax is correct.”

Error when hitting "Create credentials" :

The remote server return error (409) Conflict (Create Credential)

1. something is holding active lease on blob file. Perhaps Azure Storage Explorer. disconnect Azure storage explorer
2. conflict with Azure storage credential

The blob file is either has an active lease Or is broken. Try a different blob.

How good have you found this content?