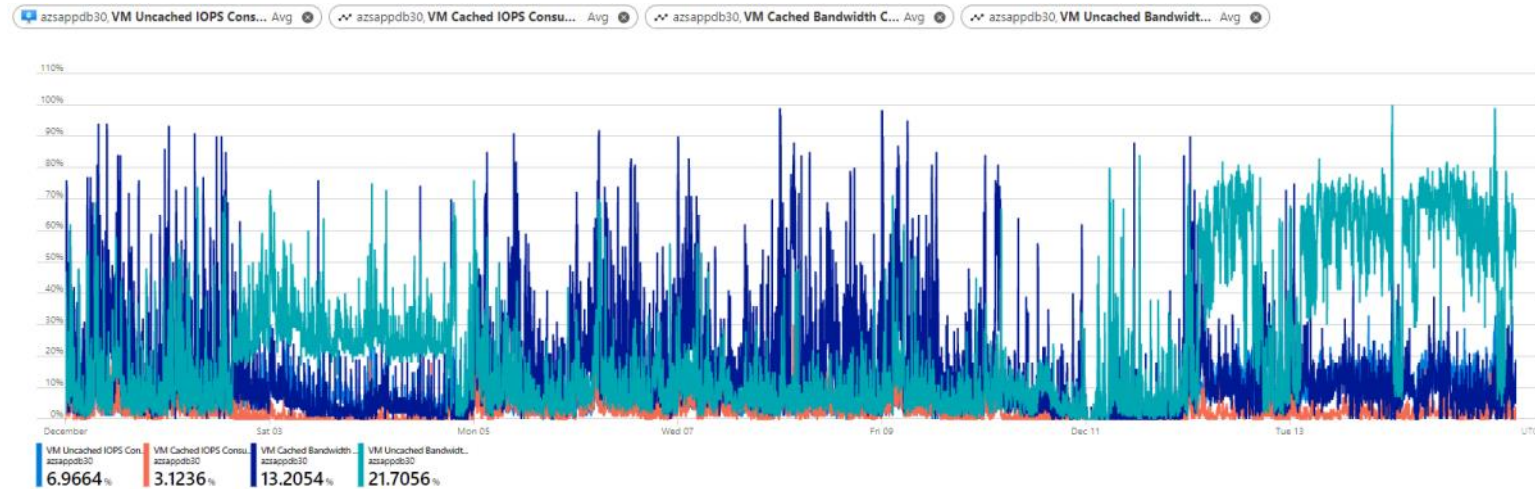


PE1

Friday, November 18, 2022 6:45 AM

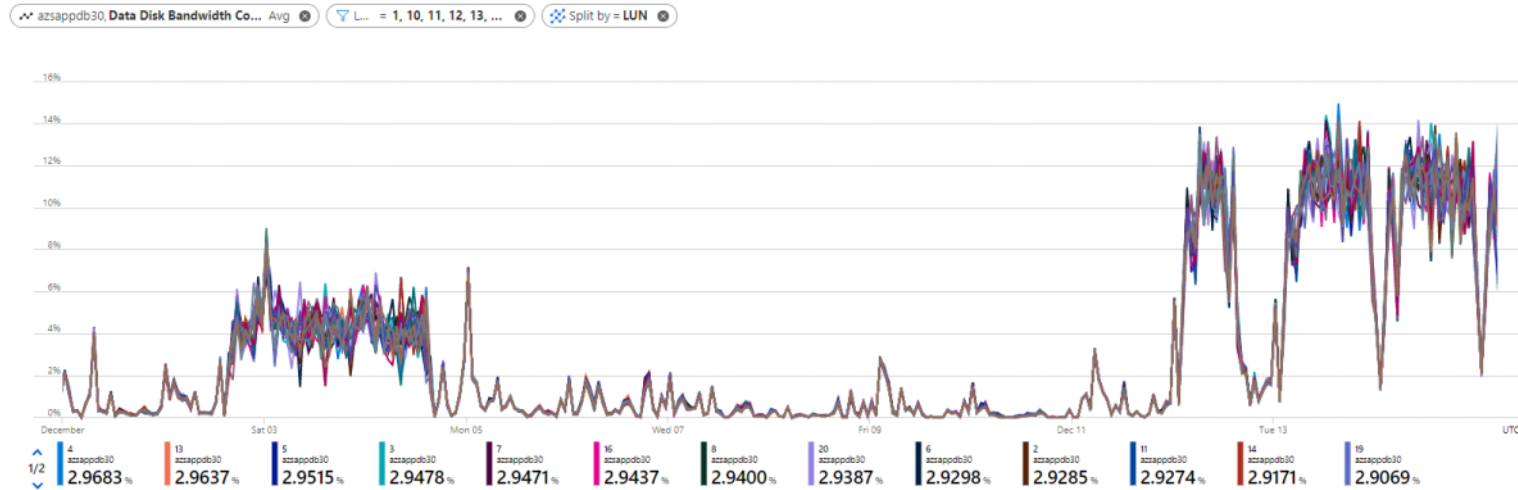
Hi All,

We've tried to dive deeply into AZSAPDB30 VM/disks metrics and found following:



According to above we can see that IOPS are not our bottlenecks and no issues relating bandwidth capping. Despite the fact average is ~ 21% we can see a lot of spikes for bandwidth/throughput which is acceptable.

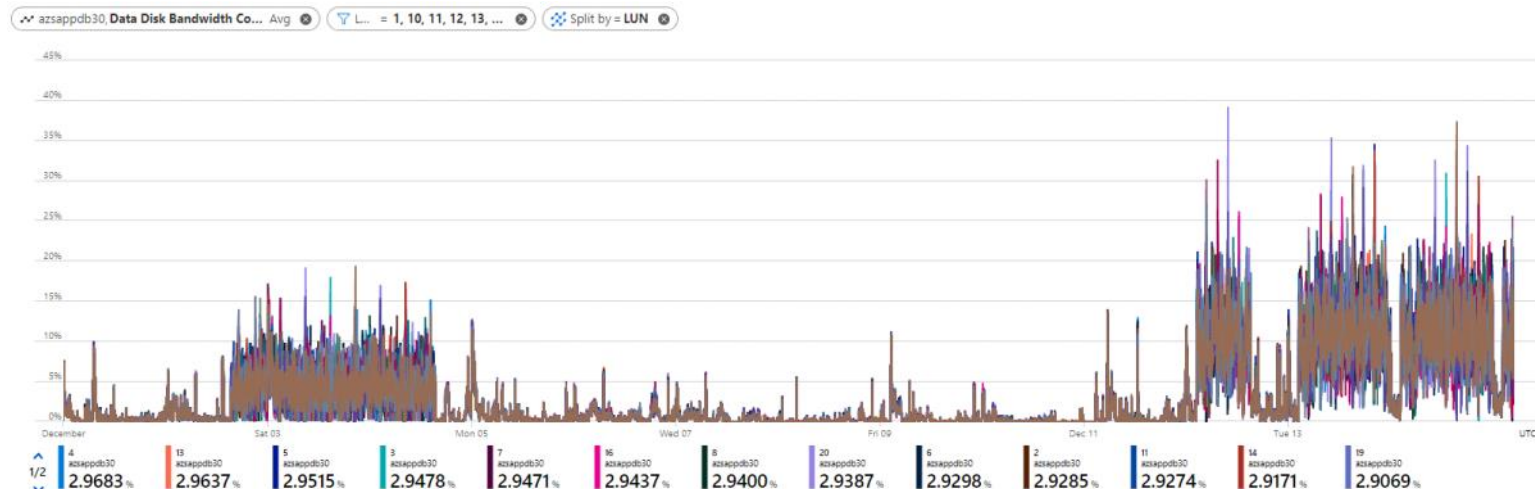
Going deeper into disks level:



We can see that there were cases when bandwidth of data disk (LUN 1-20 , F:\MSQLData) are high compare to previous dates.

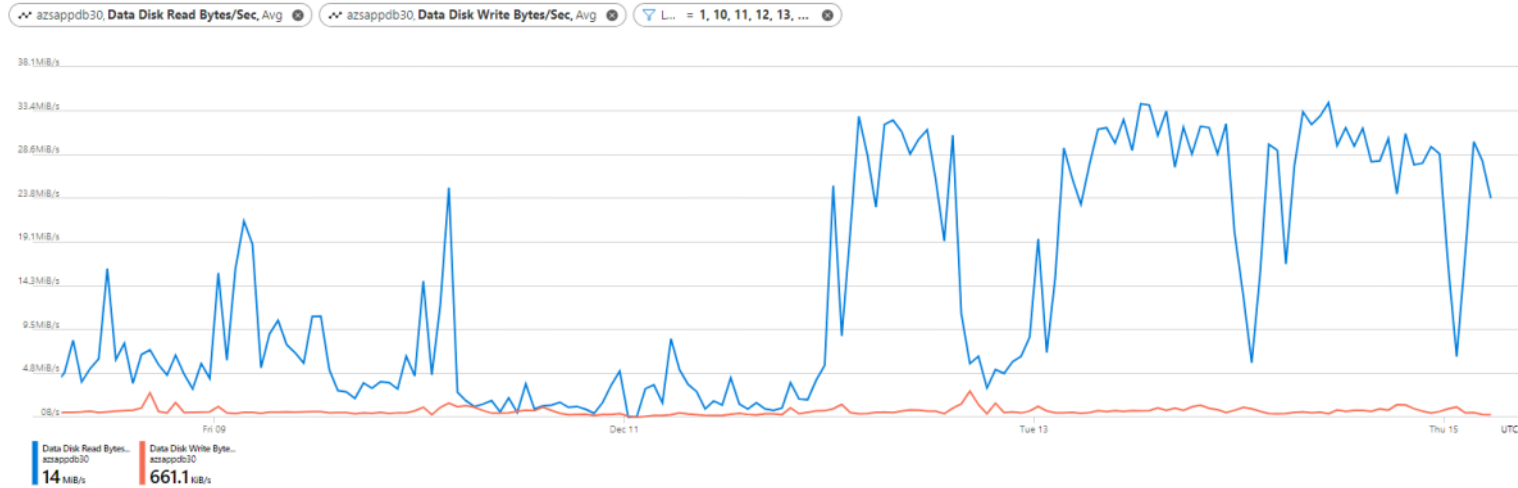
We need to remember that those are average metrics, which means that between sample period there might be single spikes but again no issues.

This is excellent visible when I short the metric for December current and increase frequency probe to 5 minute:

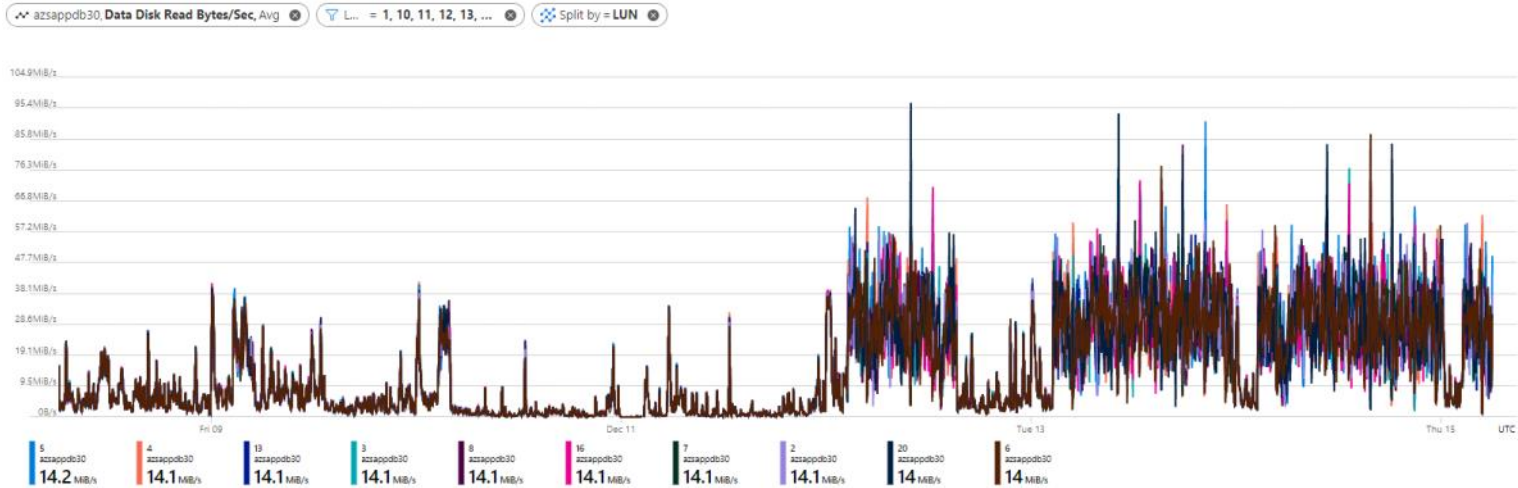


As you can see disk with LUN 1-20 (F:\MsSQLData) has a lot of single spikes but hitting only below 40%.

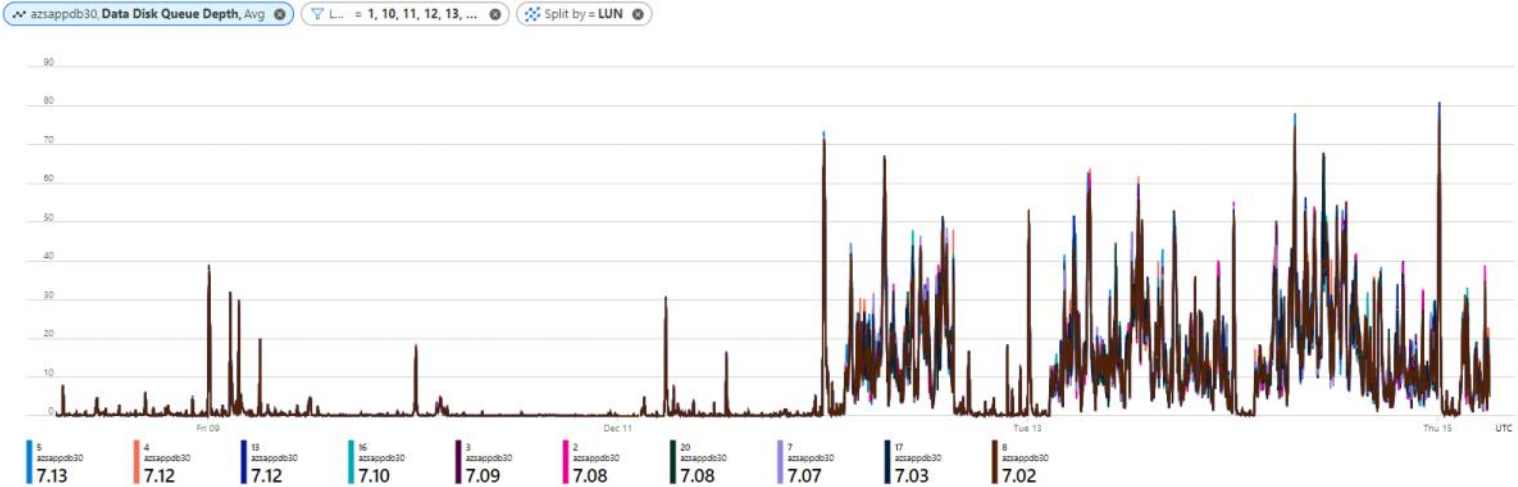
As of December, data disk reads was capped several times.



When we look on the read bytes at the same time we seen Data disks have been extensive use for read data from them (especially this LUN 1-20, F:\MsSQLData):



When we looked at Data Disk queue length it shows some queues and there are spikes for LUN 1-20, F:\MsSQLData:

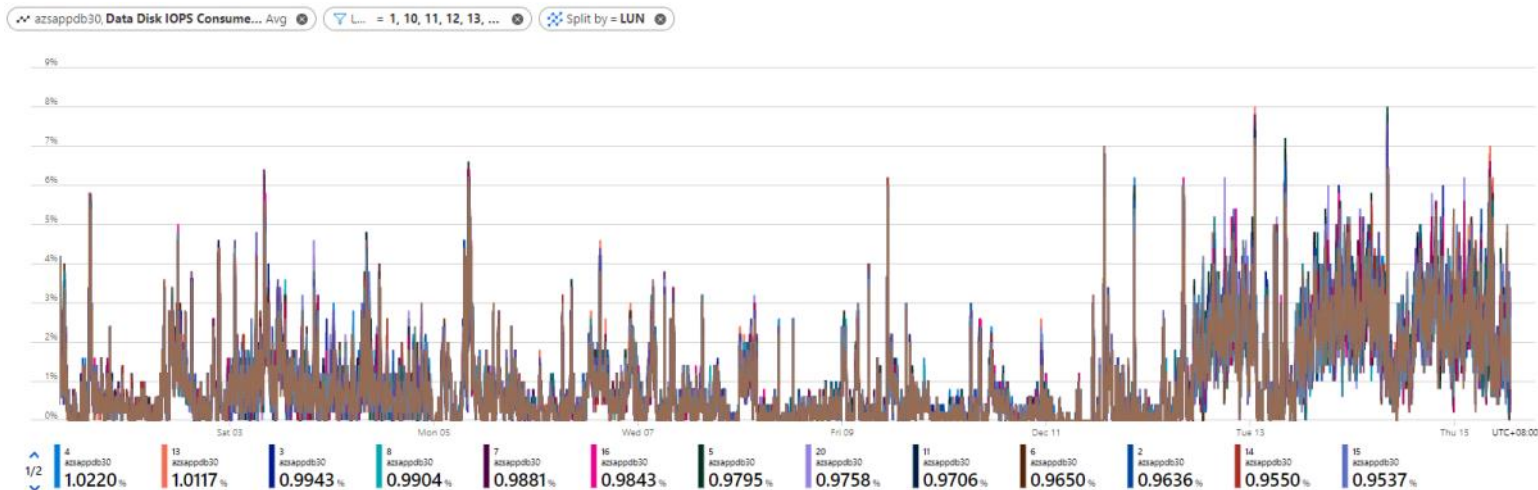


According to the MS:
"For premium SSDs, each I/O operation less than or equal to 256 KiB of throughput is considered a single I/O operation. I/O operations larger than 256 KiB of throughput are considered multiple I/Os of size 256 KiB."

MsSQLData data disk is 40TB 7k5 IOPS , 250MBs (238MiB/s) throughput , to line out units, 190MiB/s = 200MBs

But wait here is the MS trick 7k5 IOPS * 256KiB gives 1920 MiBs (1.9GiBs) of throughput , which is not true of course. The single IO size for 250MB limits would be only 32KiB.

as 32KiB is around 10-15% of 256KiB the usage of IOPS should be around 10-20% , and usage clearly shows below 10%:



Taking all into consideration it looks like there are batch processing which extensively reads huge amount of data from the following data files of PE1DB .

	ReadLatency	WriteLatency	Latency	Latency Desc	AvgBPerRead	AvgBPerWrite	AvgBPerTransfer	Drive	DB	physical_name
10	88	40	79	Bad	41597	16299	36793	F:	PE1	F:\MSSQL\Data\PE1DATA9.ndf
11	87	40	78	Bad	41595	16319	36778	F:	PE1	F:\MSSQL\Data\PE1DATA12...
12	85	39	76	Bad	41538	16145	36788	F:	PE1	F:\MSSQL\Data\PE1DATA10...
13	85	39	76	Bad	41531	16383	36660	F:	PE1	F:\MSSQL\Data\PE1DATA11...
14	83	39	74	Bad	152289	16206	126252	F:	PE1	F:\MSSQL\Data\PE1DATA7.ndf
15	83	38	74	Bad	46899	15934	40925	F:	PE1	F:\MSSQL\Data\PE1DATA8.ndf
16	81	39	73	Bad	152009	15919	126226	F:	PE1	F:\MSSQL\Data\PE1DATA5.ndf
17	82	38	73	Bad	151841	16016	125748	F:	PE1	F:\MSSQL\Data\PE1DATA6.ndf
18	80	37	72	Bad	152024	15707	126549	F:	PE1	F:\MSSQL\Data\PE1DATA4.ndf

I'm assuming batch processing as we can see that IOPS are not capped but this may be due to data skewness wherein lot of users/application needed data resides on that particular datafiles which were on this disk location.

I'm also checking on the possibilities of table statistics value and index fragmentation for this. Some table stats seems to be not updated yet for this DB.

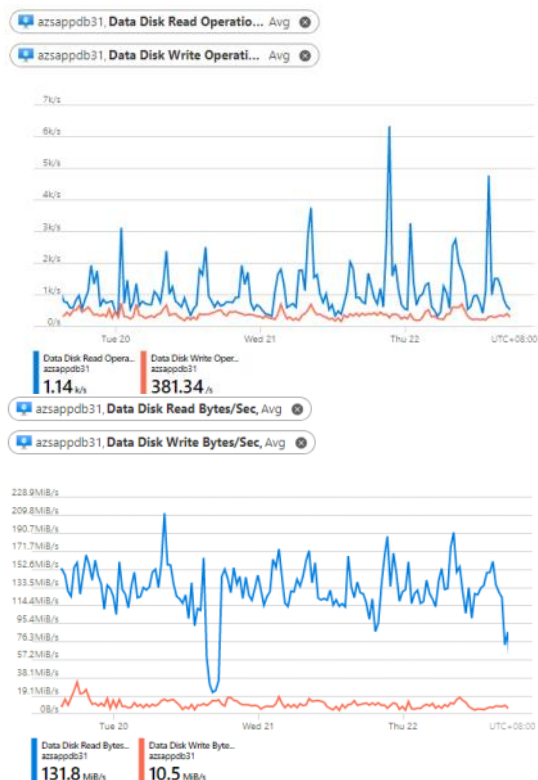
Results Messages

Table Name	Stat Name	Last Updated
1 /ICADMC/00000212	_WA_Sys_00000005_2123D60D	NULL
2 /ICADMC/00000219	_WA_Sys_00000005_6D6073FC	NULL
3 /ICADMC/00000221	_WA_Sys_00000005_68052B54	NULL
4 /ICADMC/00000228	_WA_Sys_00000005_6AC7C55C	NULL
5 /ICADMC/00000240	_WA_Sys_00000005_08E23828	NULL
6 /ICADMC/00000240	_WA_Sys_00000006_08E23828	NULL
7 /ICADMC/00000241	_WA_Sys_00000005_108359F0	NULL
8 /ICADMC/00000241	_WA_Sys_00000006_108359F0	NULL
9 /ICADMC/00000242	_WA_Sys_00000005_18247B8B	NULL
10 /ICADMC/00000242	_WA_Sys_00000006_18247B8B	NULL
11 /ICADMC/00000244	_WA_Sys_00000004_2766BF48	NULL
12 /ICADMC/00000244	_WA_Sys_00000005_2766BF48	NULL
13 /ICADMC/00000244	_WA_Sys_00000006_2766BF48	NULL
14 /ICADMC/00000244	_WA_Sys_00000007_2766BF48	NULL
15 /ICADMC/00000244	_WA_Sys_00000008_2766BF48	NULL
16 /ICADMC/00000265	_WA_Sys_00000005_1ACBDE39	NULL
17 /ICADMC/00000265	_WA_Sys_00000006_1ACBDE39	NULL
18 /ICADMC/00000279	_WA_Sys_00000004_5A6C3635	NULL
19 /ICADMC/00000279	_WA_Sys_00000005_5A6C3635	NULL
20 /ICADMC/00000282	_WA_Sys_00000006_7B3D8ABA	NULL
21 /ICADMC/00000290	_WA_Sys_00000004_15F21225	NULL
22 /ICADMC/00000290	_WA_Sys_00000006_15F21225	NULL
23 /ICADMC/00000320	_WA_Sys_00000004_34D429F3	NULL

Query executed successfully. azsappdb30,PE1DB (14.0 RTM) VESTAS/reaba-adm (2073) PE1 00:01:00 56,635 rows

As per double checking, the update stats job is scheduled to be running daily. Checking on Index fragmentation on PE1, but my query is running long and caused blockings.

Apart from the resolution proposed by MS to check the frequency of the update statistics and missing indexes. We strongly recommend to **check index fragmentation** as bad performance is rooted back to bad index usage, missing indexes, or out-of-date statistics at database level. This applies as well to all production SQL servers.



From Azure Service Health:

Emerging issues

1 issue

Azure Networking - Multiple regions - Investigating

Starting at 07:05 UTC on 25 January 2023, customers may experience issues with networking connectivity, manifesting as network latency and/or timeouts when attempting to connect to Azure resources in multiple regions, as well as other Microsoft services. We are actively investigating and will share updates as soon as more is known.

Frequently asked questions

Is this incident impacting me?

Engineering teams are investigating an emerging issue and working to confirm if this incident impacts you. If we confirm that you are impacted, you will receive regular updates through [Azure Service Health](#).

Can I set up alerts to get informed about this incident?

You can set up Service Health alerts to receive notifications about this incident. You will only receive notifications if we confirm that this incident impacts you. Visit [aka.ms/ash-alerts](#) for instructions on how to set up Service Health alerts.

Please note that Service Health alerts won't notify you about emerging issues until we confirm that you are impacted. However, if you want to be notified about emerging issues where you haven't yet been confirmed as an impacted customer, you can consume the RSS feed from the [Azure Status Page](#).

Why am I seeing this?

Receiving this notification doesn't necessarily mean you are impacted. Azure aims to be very transparent regarding any issue that may be impacting you. We understand that you have critical operations that depend on our cloud and could notice an impact before we confirm that you are affected. Visit Azure Service Health to learn more about issues that may be impacting your Azure services and regions.

Azure Status:

Refresh every

2 minutes

Good

Information

Warning

Critical

	Americas	Europe	Asia Pacific	Middle East and Africa	Azure Government	Azure China	Jio ⁸								
PRODUCTS AND SERVICES	NORTH CENTRAL	NORTH EUROPE	WEST EUROPE	FRANCE CENTRAL	FRANCE SOUTH	UK WEST	UK SOUTH	SWITZERLAND NORTH	SWITZERLAND WEST	NORWAY EAST	NORWAY WEST	GERMANY NORTH	GERMANY WEST CENTRAL	SWEDEN CENTRAL	SWEDEN SOUTH
IMPACTED SERVICES															
Network Infrastructure	Warning	Warning	Warning	Warning	Warning	Warning	Warning	Warning	Warning	Warning	Warning	Warning	Warning	Warning	Warning
COMPUTE															
Azure VMware Solution by CloudSimple			Good												
Virtual Machines		Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good

Issue name	Tracking ID	Services	Regions	Start time	Last updated	Scope
Azure Networking - Multiple regions - Investigating	VSG1-B90	Network Infrastructure	Southeast Asia; East US; West US 2; See...	1/25/2023, 15:33:50 (...)	8 minutes ago	Subscription
Azure Active Directory - Global	BSH1-BP8	Azure Active Directory	Global	1/25/2023, 15:19:47 (...)	11 minutes ago	Subscription

2 active issues affecting 44 locations



January 2023

1/25

Azure Databricks - West Europe - Mitigated (Tracking ID Q545-B80)

Summary of impact: Between 01:35 UTC and 04:06 UTC on January 25, users may have experienced failures to render the account console page, notebooks, or may have experienced failures creating new workspaces, users, and Databricks user interfaces. Cluster CRUD operations and workspace authentication might have timed out or failed. The running jobs, along with the jobs submitted through APIs and schedulers, might have failed as well.

Preliminary Root Cause: Azure has identified a **power event** that caused an outage to a portion of the storage system in the West Europe region. The outage led to failures in database systems backing the aforementioned Databricks services in that region.

Mitigation: The storage service was recovered as soon as the power maintenance event had been completed, mitigating the downstream impact for the Azure Databricks service.

Next Steps: Databricks will follow up with Azure Engineering to establish the full root cause and prevent further occurrences. Stay informed about Azure service issues by creating custom service health alerts: <https://aka.ms/ash-videos> for video tutorials and <https://aka.ms/ash-alerts> for how-to documentation.