Fail to deploy VNET Integrated server (Fixed)

Last updated by | Shawn Xiao | May 30, 2021 at 6:48 PM PDT

Issue Description and Symptom

It is very often that customers failed to deploy a Flexible server if the server was configured with VNET integrated.
And this hehavior will ocurr in the scenario of stop/start, scale, PITR, and creating replicas.
The symptom could be deployment failed due to long running and timeout.

Issue Cause

INTERNAL - It is because of a known private network issue which was identified by network team. The internal RCA is Network team has released a sort of 'OPAPH' cluster which can caused injected vnet server fail. Every region may include this sort of cluster. We have a patch to bypass the bad network path that we forecast can deploy at beginning of April. The fix is in M8
EXTERNAL - For external RCA, you can tell Cx we are having a network issue that engineer team is working on. And a sample RCA could refererd as below:

```
ROOT CAUSE:
We currently have a bug that under rare cases will cause VNet servers to lose connectivity to backend storage.
This issue would occurred during the operations like stop/start, scaling, creating replicas, enabling/disablin

WORKAROUND:
Add service endpoint "Microsoft.storage" to related integrated VNET.

CORRECTIVE ACTIONS:
We are committed to improving our services further and constantly innovating our service. The fix for this VNE
```
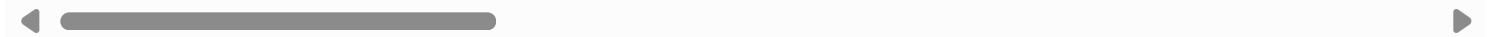
Fix Plan

We target at the beginning of April to fix it in all regions.

Investigation Steps to Define the Issue

1. look for virtual machine name of mysql server

```
MonOrcasBreadthCMSSnapshot
| where TIMESTAMP > <provision_start_time> and TIMESTAMP < <provision_end_time>
| where server_name =='gum-db-02' and server_state != 'Tombstoned'
| project TIMESTAMP, server_name, virtual_machine_name
| summarize min(TIMESTAMP), max(TIMESTAMP) by server_name, virtual_machine_name
```

2. Confirm if the virtual machine is on OPAPH cluster (Ref: [https://msdata.visualstudio.com/Database Systems/_wiki/wikis/Database Systems.wiki/18769/OPAPH-Cluster-Issue-TSG](https://msdata.visualstudio.com/Database) ↗):

   - Run below KUSTO query with the VM's name which hits the timeout issue
     Note #1: In case of HA, it should be the standby VM if standby pg engine startup is timing out.

Note #2: Please add cluster connection https://azurecm.kusto.windows.net ⬈ to your KUSTO before running this query

```
LogContainerHealthSnapshot
| where roleInstanceName contains "<replace_by_vm_name>"
| take 1
| project Tenant
```

- Locate "Tenant" from the result.

- Go to this link: https://preview.jarvis-west.dc.ad.msft.net/s/150EDA74 ⬈

    - => Click on "Overrides" from the upper right level
    - => "+Override"
    - => "Dimension Name" choose "Cluster Name"
    - => "Dimension Value" put in Tenant from above
    - => Apply.

- If it is able to find the cluster in the first panel, that means your server lands on OPAPH cluster. Otherwise it's not OPAPH.

3. If it is OPAPH cluster, then ask Cx follow tips of adding Service Endpoint of Azure Storage and retry vnet server provision:

    - Go to your virtual network page.
    - Select the VNET in which you are trying to use for your server.
    - Choose the subnet that is delegated for Flexible server.
    - On the pull-out screen, under "Service endpoint", choose "Microsoft.storage" from the drop-down.
    - Save the changes.

4. [For CSS]We can also double check if customer has enabled this service endpoint in ASC.

- Go to Resource Explorer. Select the Vnet and Subnet
- Expand subnet and see if Microsoft.storage service endpoint has been enabled or not.

5. If it is not OPAPH, please open an ICM