Cloud GPU Service
Troubleshooting
Product Documentation
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GPU Usage Shows 100%

Problem Description

When using a GPU instance, if you use `nvidia-smi` to view the GPU status in the system, the GPU usage may be displayed as 100% while no processes are using GPU, as shown below:

![Screenshot of nvidia-smi output](image)

Possible Causes

This may be caused by the ECC Memory Scrubbing mechanism used when the instance loads the NVIDIA driver.

Solution

Run the `nvidia-smi -pm 1` command in the instance system to get the GPU Driver into the Persistence mode.

Instructions
1. Log in to the GPU instance and run the following command:

```
nvidia-smi -pm 1
```
2. Run the following command to check GPU usage:

```
[root@UM_18_107_centos data]# nvidia-smi -pm 1
Persistence mode is already Enabled for GPU 00000000:00:03.0.
Persistence mode is already Enabled for GPU 00000000:00:05.0.
All done.
[root@UM_18_107_centos data]# 
```

You will see the GPU usage is normal, as shown below:
```bash
[root@VM_18_107 CentOS]# nvidia-smi
Tue Aug 29 15:31:39 2017
+-----------------------------------------------------------------------------+
<p>| NVIDIA-SMI 304.66                                                                 |
| Driver Version: 304.66                                                        |
|-------------------------------  ------------------------------------------------------|
| Name     Persistence-Ml  Bus-Id    Disp.A  Volatile Uncorr. ECC |</p>
<table>
<thead>
<tr>
<th>Fan  Temp  Perf  Pwr:Usage/Cap  Memory-Usage  GPU-Util  Compute M.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0  Tesla P40      On  00000000:00:03.0 Off  0</td>
</tr>
<tr>
<td>N/A  22C  1W  10W / 250W  0MiB / 22912MiB  0% Default</td>
</tr>
<tr>
<td>1  Tesla P40      On  00000000:00:06.0 Off  0</td>
</tr>
<tr>
<td>N/A  23C  1W  9W / 250W  0MiB / 22912MiB  0% Default</td>
</tr>
</tbody>
</table>
+-----------------------------------------------------------------------------+```

**Processes:**

<table>
<thead>
<tr>
<th>GPU</th>
<th>PID</th>
<th>Type</th>
<th>Process name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No running processes found
VNC Login Failures

Problem Description

When you attempt to log in to a Windows instance via VNC or log in to a Linux instance via VNC, you may not be prompted to log in, but instead encounter a black screen or the blue Windows logo, as shown below:

Possible Reasons

1. Your GPU instance is installed with a graphics driver.
   When you log in to a GPU instance via VNC, the VGA device emulated by QEMU is accessed by default to obtain the framebuffer of the operating system for login. After you install a graphics driver on the GPU instance, the framebuffer
will no longer be handled by the VGA device. As a result, you cannot log in to the operating system via VNC.

2. The operating system failed to start due to other causes. For example, third-party software that conflicts with the operating system is installed on the GPU instance.

Solution

1. If the GPU instance is installed with a graphics driver, install a VNC server on the instance so that you can log in to the GPU instance via a local VNC client.
   
   You need to obtain the VNC server and the client installation packages by yourself.

2. Check the installed third-party software and analyze why the software leads to login failures.
   
   We recommend that you uninstall the conflicting third-party software or reinstall the operating system.