Intel® Data Center GPU Max 1100 and 1550 Configuration Recommendation

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Revision History

Revision Number	Description	Date
1.0	• Initial release of the document.	April 2024

1 Introduction

This document contains configuration recommendations for security advisories

1.1 Key Characteristics of the Communication

Intel identified an issue with SRIOV/Intel® Virtualization Technology (Intel® VT) for Directed I/O (Intel® VT-d) support and has crafted corresponding guidelines for secure use. The issue is discussed in detail under the Technical Advisory: INTEL-SA-01041 and summarized below. Intel strongly recommends implementing the configuration guidelines below when using Max 1100 and 1550 (PVC) to minimize impacts from the issue.

1.2 Issue Found

An improper write to guest VM kernel memory may allow GPU denial of service.

1.3 Guidelines

Intel strongly recommends customers using SRIOV or Intel VT-d to implement the following configuration guidance:

- Enable PCIe Downstream Port Containment (DPC) when using arbitrary guest system software. This limits the potential vulnerability to the GPU and prevents impacts to the host server. This also allows bad actor identification from the host system.
- Use only curated guests for virtualized environments. This configuration increases protection from untrusted memory writes.
- Assign each VM only one GPU if using passthrough virtualization. This reduces the risk to only that VM. If virtualization uses SRIOV, then all GPU virtual functions should be assigned to one VM. This also contains the risk to the VM using that GPU.

"DPC disabled" function may only be used with full understanding of the impact as addressed in the Technical Advisory INTEL-SA-01041. This configuration is not supported by Intel. Using arbitrary guest system software with DPC disabled will increase the risk of untrusted memory writes.

Please refer to additional details in the INTEL-SA-01041 Technical Advisory which can be found at: https://www.intel.com/content/www/us/en/resources-documentation/.