

	Variant 1	Variant 2	Variant 3
Is a user space attack from a guest to Xen possible?			
32bit PV	Yes [3]	Yes [2]	No
64 bit PV	Yes [3]	Yes [2]	Yes [1]
HVM	Yes [3]	Yes [2]	No
PVH	Yes [3]	Yes [2]	No
ARM	Yes [4]	Yes [4]	No
Is a kernel space attack from a guest to Xen possible?			
32bit PV	?	?	?
64 bit PV	Yes [3]	Yes [2]	Yes [1]
HVM	Yes [3]	Yes [2]	No
PVH	Yes [3]	Yes [2]	No
ARM	Yes [4]	Yes [4]	No

Mitigations

- [1] Impacts Intel CPUs only. PV in PVH/HVM shim and/or KAISER for Xen (when implemented).
- [2] Andy's SP2 patch together with firmware updates (under development) – probably need better description of the patch.
- [3] Under investigation, but hard to exploit. Maybe link to George's analysis.
- [4] Mitigation is worked on by ARM (under development)

	Variant 1	Variant 2	Variant 3
Is a user space attack on the guest kernel possible (when running in a Xen VM)?			
32bit PV	Yes	Yes	Yes [1]
64 bit PV	Yes	Yes	No
HVM	Yes	Yes	Yes [1]
PVH	Yes	Yes	Yes [1]
ARM	Yes [2]	Yes [2]	Yes [2]
Is a user space attack on other guest possible (when running in a Xen VM)?			
32bit PV	?	?	No
64 bit PV	?	Yes	Yes [1]
HVM	?	?	No
PVH	?	?	No
ARM	?	?	?
Is a kernel space attack on other guest possible (when running in a Xen VM)?			
32bit PV	?	?	?
64 bit PV	Yes	Yes	Yes [1]
HVM	?	?	No
PVH	?	?	No
ARM	?	?	?

Mitigations

For mitigations please consult your operating system vendor.

[1] Impacts Intel CPUs only.

[2] Impacts some ARM CPUs as outlined in

<https://developer.arm.com/support/security-update>. For information on whether CPUs from ARM eco-system vendors are affected, please consult your vendor.