

Changes from CySemoL v2.2 to v2.3

(1) Correction (bugfix) of an exponential distribution specification in attack step *ExecuteMaliciousPayload* of the asset *OperatingSystem*

Motivation. An anomaly was observed in the OCL derivation of the attack step *OperatingSystem.ExecuteMaliciousPayload*. Specifically, while other values had lambda parameters to exponential distribution within the interval of (0.12, 0.19), the value corresponding to the combination {*NIDS*=false, *HIDS*=true, *Updated*=false, *Tuned*=true} was 0.001. Moreover, the value was found not to logically fit in, since it would imply much greater mean challenge for the attacker to perform the attack step than if all e.g., the combination {*NIDS*=true, *HIDS*=true, *Updated*=true, *Tuned*=true}. The probability functions of $\exp(0.001)$ – the old value, and $\exp(0.143)$ – the new value, are significantly different.

Solution. The value for the combination of {*NIDS*=false, *HIDS*=true, *Updated*=false, *Tuned*=true} was set to $\exp(0.143)$ – based on calculations on the results of the original research study.

Effect. Improvement in calculation accuracy.