Binary Armor®

Return on Security Investment (ROSI)

Binary Armors' security pedigree helps partners and OEMs calculate Return on Security Investment (RoSI) with confidence. This is important because budgets are tight and cybersecurity costs must be justified. With Binary Armor, you can confidently calculate costs avoided, rather than costs incurred.

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Cyberattacks impose both financial and tangible costs on the hacked organization, and oftentimes on the hacked organization's partners and customers. Those costs, which can include halted operations resulting in lost revenue and profit, equipment damage and restoration, ransom payments, employee injuries, and more, are sometimes quite significant and quite damaging to the victim organization.

Cybersecurity's sole purpose is to reduce the risk of these financial and tangible impacts from being realized. Despite its importance, cybersecurity protection requires an investment (aka cost), and that investment cost can be difficult to justify when budgets are tight. An increasingly accepted method for justifying cybersecurity investment is the Return on Security Investment (RoSI) model. RoSI focuses on estimating the costs avoided by preventing a cyberattack rather than focusing on the investment cost alone.

Calculating costs avoided enables determination of a return on investment, and along with being more realistic than focusing on cost alone, delivers a financial outcome that budget managers can embrace. One method for calculating Return on Security Investment (RoSI) is shown below: The example is based on a purely hypothetical situation intended to show how to develop a RoSI calculation:

Determine Single Loss Expectancy (SLE) in $

Single loss expectancy is total estimated cost caused by a cyberattack on a victim organization. The components of SLE can consist of the components listed below. Each organization should discuss and decide on the SLE components that are important to them.

Potential SLE Components:

- Lost revenue and profit from halted operations
- Equipment restoration / replacement
- Ransom payment
- Lost productivity caused by employee injuries
- Increased financing charges on loans
- Increased cybersecurity insurance premiums
- Brand degradation
- Lawsuits

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Determine Annual Rate of Occurrence (ARO):

Insurance agencies, cyber-focused agencies and foundations often collect industry-relevant statistics on the likelihood of an individual company suffering a cyberattack. Oftentimes that information is available for free. Use the available information to determine the likelihood, expressed as a percentage, of your company suffering a cyberattack in a single year. Remember to include consideration of your existing cybersecurity capabilities as part of your ARO.

Determine Annual Loss Expectancy (ALE):

Multiply SLE with ARO to determine the risk-adjusted annual loss your organization faces from a cyberattack. At this point, the Current State financial risk your organization faces have been defined.

Factors	Current State
Single Loss Expectancy (SLE)	$3,175,000
Annual Rate Occurrence (ARO)	5%
Annual Loss Expectancy (ALE)	$158,750

Estimate Revised Annual Rate of Occurrence (ARO):

The new cybersecurity technology investment should reduce the ARO – otherwise there is no reason to invest. Determine the revised ARO and enter that value in the "Cybersecurity Investment" column.
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Calculate Monetary Loss Reduction (MLR):

Subtract ALE from the "Cybersecurity Investment" column from the ALE in the "Current State" column. The result is the monetary loss reduction delivered by the new cybersecurity investment.
See page 3

Determine Cost of the Cybersecurity Technology Investment (CTI):

Enter the cost of the new cybersecurity technology into the "Cybersecurity Investment" column.
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Determine Return on Security Investment (RoSI):

Subtract the cost of the new cybersecurity investment from the revised monetary loss reduction to obtain the RoSI. In this case, a $10K investment resulted in a $117K Return on Security Investment.
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Factors	Current State	Cybersecurity Investment
Single Loss Expectancy (SLE)	$3,175,000	$3,175,000
Annual Rate Occurrence (ARO)	5%	1%
Annual Loss Expectancy (ALE)	$158,750	$31,750
Monetary Loss Reduction		$127,000
Cybersecurity Technology Investment		$10,000
Return on Security Investment		$117,000

Notes

- Calculating Return on Security Investment (RoSI) invariably requires some estimates. Every company must develop estimates based on their own deep knowledge of the particulars of their situation / network.

- The Revised "Annual Rate of Occurrence" value in the "Cybersecurity Investment" column has to consider the effectiveness of the new cybersecurity technology in driving down the Annual Rate of Occurrence. This step can be difficult because there is no independent reference that says, "Buy this product to reduce your vulnerability by 10%." In the absence of an independent risk reduction reference, companies are advised to seek a surrogate reference. The Binary Armor team suggests evaluating a product's 3rd party certifications as a method for determining risk reduction, where a product with zero 3rd party certifications is likely to deliver no risk reduction, and a product with more than one 3rd party certification provides confidence that the Annual Rate of Occurrence will be lower than the Current State.

- The numerous Binary Armor 3rd party certifications help you calculate your Return on Security Investment (RoSI) with confidence.

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