

Lab 1.2: Risk Worksheet Solutions

IN618 Security

Exercise one

Suppose that a qualitative analysis rates the following risks as below.

Security Event	Event Probability	Resulting Harm
Web Site Defacement	Medium	Low
XSS Attack	High	Medium
Buffer Overflow on Web Server	Low	High

Rate these risks from highest to lowest priority.

1. *XSS Attack*
2. *Buffer Overflow*
3. *Defacement*

Exercise two

A web site generates \$25,000 per hour in revenue. The probability of a web site outage in any given year is 10% and such an outage would last 2 hours and cost \$1200 to correct. What is the Annual Loss Expectancy (ALE)?

Cost of outage: $(\$25,000 * 2 \text{ hours}) + \$1200 = \$51,200$

Probability of outage in a given year: 0.1

*ALE = cost * probability* $= \$51,200 * 0.1 = \$5,120$

Note: Some of our discussion around this in class was a bit muddled, so slightly different answers were accepted.

Exercise Three

A small consulting firm works on one project at a time and stores project data on a single server. The value of this data is \$100,000 and a server failure would jeopardise up to 90% of it. The probability of such a failure in any year is 0.20. What is the ALE?

$$ALE = cost * probability = (0.9 * \$100,000) * 0.2 = \$18,000$$

Exercise Four

You have a \$3 million data centre located in an area at risk of flooding. A major flood that would destroy the data centre occurs once every hundred years. Compute the ALE.

$$ALE = cost * probability = \$3,000,000 * 0.01 = \$30,000$$

Based on this ALE, would you recommend that the company spend \$35,000 per year to control this threat?

No. The cost to control the threat exceeds the cost of the threat.