

Memo

To:

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Subject: System Risk Assessment and Priority Recommendations

Based on the formula **Risk = (cost of a security breach) * (likelihood it will occur)**, the following four systems were evaluated, and protection priority recommendations were made.

1. Internal File Server

Breach Cost: 7

Explanation: The internal file server contains sensitive data and employee information. A breach would result in financial loss and reputational risk, but it is not directly tied to critical business processes.

Likelihood of Occurrence: 3

Explanation: Located in the internal network with strict access control, but susceptible to internal threats or lateral attacks.

Risk Score: 21

2. Web Server in the DMZ

Breach Cost: 8

Explanation: This server hosts company information and has a moderate level of data sensitivity. A breach could lead to service disruptions and customer trust issues.

Likelihood of Occurrence: 9

Explanation: As a publicly exposed system, it is a primary target for attackers, with a very high likelihood of being breached.

Risk Score: 72

3. Internal Print Server

Breach Cost: 3

Explanation: The print server is used for non-critical document processing, and the financial or reputational impact of a data breach is low.

Likelihood of Occurrence: 2

Explanation: The print server is simple in functionality and not externally exposed, making it unlikely to be targeted.

Risk Score: 6

4. Hardware Spam Filter Firewall

Breach Cost: 9

Explanation: This system is crucial for blocking phishing emails and malware. Its failure would

expose the entire network to widespread threats, with severe consequences.

Likelihood of Occurrence: 6

Explanation: Although it offers strong protection, as a critical element of network security, attackers may target it.

Risk Score: 54

Priority Conclusion

Web Server in the DMZ (Risk Score: 72) – This system has the highest priority for protection due to its high risk of attack and moderate data sensitivity.

Hardware Spam Filter Firewall (Risk Score: 54) – As a core system protecting overall network security, it is of critical importance and should not be overlooked.

Internal File Server (Risk Score: 21) – Although it contains sensitive data, it is well-protected internally and is a lower priority.

Internal Print Server (Risk Score: 6) – With the lowest impact and likelihood of breach, this system should be the lowest priority for protection.