**Appendix A**

**A.1 Asset Value Parameters**

**A.1.1 Qualitative**

It has been identified that there exist 3 types of qualitative labels to define information system assets belonging to Winterfell. These three labels were established after concluded discussions with the Managers, High Technical Staff, and separate system custodians. The labels were authorized by the Executive Members. The Labels are as follows.

1. Primary
2. Secondary
3. Tertiary

**A.1.2 Quantitative**

𝑨𝒔𝒔𝒆𝒕 𝑽𝒂𝒍𝒖𝒆=𝑷𝒉𝒚𝒔𝒊𝒄𝒂𝒍 𝑽𝒂𝒍𝒖𝒆 **+ Informational** 𝑽𝒂𝒍𝒖𝒆

• Physical Value – Monetary value given to the asset based on perceptible values such as the prices of the hardware, subscriptions paid for services related to the assets – firewall subscriptions etc.- and many other similar physical prices. This was considered as a responsibility of the risk management team. Managers, High Technical Staff and separate system custodians were involved in defining the monetary values of those hardware, subscriptions etc.

• Informational Value – Monetary value given to the asset based on its importance to the organization. This was considered as not a responsibility of the risk management team. Informational value of each asset was decided by the Managers, High Technical Staff and separate system custodians and was finalized and authorized by the Executive Members.

**A.2 Assets Values Calculations**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Asset No | Asset | Qualitative Label | Quantitative Value | | |
| Informational Value (USD) | Physical Value (USD) | |
| **1** | **SIMS** | Primary | $10,000 | Hardware | |
| Name | Price |
| IDS and IPS | $499 |
| Firewall - Cloudflare | $2,499 |
| PowerSchool SIS | $6,000 |
| Total Hardware Value = $8998 | |
| Software | |
| Name | Price |
| Solarwinds-security-event-manager | $399 |
| Cloud Subscription (2000TB) – Back up | $2,000 |
| Active Directory Server | $555 |
| Oracle WebCenter Portal | $199 |
| Total Software Value = $3153 | |
| Asset Value = $8998 + $3153 + $10000 = $22151 | | |
|  | | | | | |
| **2** | **HRMS** | Secondary | $3,500 | Hardware | |
| Name | Price |
| Dell PowerEdge T30 Xeon E3-1225 v5 8GB 1TB SATA Tower Server | $600 |
| Fingerprint Time Attendance Machine | $200 |
| Total Hardware Value = $800 | |
| Software | |
| Name | Price |
| Windows 2012 Server | $555 |
| Cloud Subscription (2000TB) – Back up | $200 |
| Workday EMS | $999 |
| Total Software Value | |
| Asset Value = $800 + $1754 + $3500 = $6054 | | |
|  | | | | | |
| **3** | **FIMS** | Primary | $8,000 | Hardware | |
| Name | Price |
| Dell PowerEdge T30 Xeon E3-1225 v5 8GB 1TB SATA Tower Server | $600 |
| Total Hardware Value = $600 | |
| Software | |
| Name | Price |
| OnPay | $450 |
| ORACLE NetSuite | $999 |
| Total Software Value = $1449 | |
| Asset Value = $8000 + $1449 + $600 = 10049 | | |
|  | | | | | |
| **4** | **LMS** | Tertiary | $1,899 | Hardware | |
| Name | Price |
| HPE ProLiant DL380 Gen10 server | $899 |
| Total Hardware Value = $899 | |
| Software | |
| Name | Price |
| Talent LMS | $799 |
| webLibrarian Web Application | $149 |
| Moodle | $699 |
| Total Software Value = $1647 | |
| Asset Value = $1899 + $1647 +$899 = $4445 | | |
|  | | | | | |
| **5** | **IRSM** | Tertiary | $999 | Hardware | |
| Name | Price |
| Lenova ThinkServer TS150 | $699 |
| Computers | $5,000 |
| Total Hardware Value = $5699 | |
| Software | |
| Name | Price |
| Talent LMS | $799 |
| webLibrarian Web Application | $69 |
| Moodle | $868 |
| Total Software Value = $1647 | |
| Asset Value = $868 + $699 + $999 + $5000 = $7566 | | |