Confidentiality and Integrity Models

Name

Institutional Affiliation

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The IT Start-Up requires the establishment of a network that will uphold the confidentiality and integrity of data in the organization. Besides, following the prevalence of cybercrimes in various industries, there will be the need to establish the confidentiality and integrity models that are evidence-based. Additionally, these frameworks are based on theoretical models. The model selected for ensuring integrity is Biba Integrity Model, while the framework for ensuring confidentiality is the Bell–LaPadula model.

**Biba Integrity Model**

Biba framework is an official state changeover system of information security rules designated to define a group of access control standards to promote information integrity (Liu et al., 2017). Their integrity level arranges subjects and information into arrangements or groups. The tool is established to prevent the issue from corrupting information in a level graded higher than that of the subject and to limit the corruption of data at a lower ranking than that of the subject. Among the reasons, why this model is selected is because of its usability. Besides, the tool has been applied in numerous settings, and thus it is a verified tool.

**Bell–LaPadula model**

This model was initially established in the United States Department of Defense. It is concerned with upholding the confidentiality of data (Roslan, Hamid & Shamala, 2018). The tool hinders the users at a lower level of security from accessing the information, which is beyond their level. Besides, it prevents them from accessing unauthorized information at all times. Moreover, the Bell–LaPadula framework is among the first tool to be established; this means it has undergone several changes to perfect it. The tool has been tested and applied in various settings; this means it is likely to be effective in the current IT Start-Up. Consequently, this tool evidence-based; this as a serious implication on its reliability and dependability.

**References**

Liu, G., Wang, C., Zhang, R., Wang, Q., Song, H., & Ji, S. (2017). BTG-BIBA: A Flexibility-Enhanced Biba Model Using BTG Strategies for Operating System. *International Journal of Computer and Information Engineering,* 11(6), 765-771.

Roslan, S. N., Hamid, I. R. A., & Shamala, P. (2018). E-Store Management Using Bell-LaPadula Access Control Security Model. *JOIV: International Journal on Informatics Visualization*, *2*(3-2), 194-198.