**Module 5: Essay Paper**

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IFT 320: Managing The Cloud

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**Chapter 9**

1. **What is Enterprise Service Bus (ESB) designed to provide? Another critical**

**middleware infrastructure used in connection with ESBs is application servers. What does the application server middleware enable?**

An Enterprise Service Bus (ESB) is designed to provide a unified platform for integrating various applications and services within an enterprise. It acts as a communication backbone, facilitating the exchange of data across different systems, enabling seamless integration, and ensuring that applications can interact with each other in a loosely coupled way. This design improves scalability, flexibility, and adaptability in integrating services across different platforms and technologies. Application server middleware plays a crucial role in enabling applications to run efficiently on servers. It provides an environment where applications can be executed, managed, and accessed. This middleware handles tasks such as transaction management, security, scalability, and resource pooling, allowing developers to focus more on the business logic rather than the infrastructure concerns. Application servers thus serve as a foundation for building, deploying, and managing enterprise-level applications. (Guide to Cloud Computing for Business and Technology Managers, 2015, pp. 189-197)

**2. Describe value chain, business process, and workflow.**

* *Value Chain*: The value chain represents the largest possible process within an

organization and is decomposed into a set of core business processes and support processes necessary for producing a product or service. These core processes are further divided into activities, which can range from simple tasks like sending messages to more complex tasks such as billing or managing purchase orders. Each step within the value chain adds value to the final product or service delivered to the customer. (Guide to Cloud Computing for Business and Technology Managers, 2015, pp. 211-212)

* *Business Process:* A business process consists of a series of logically related tasks

designed to achieve a well-defined business outcome. It involves the transformation of inputs (resources, materials, information) into outputs through a sequence of activities. Business processes may occur within a single organizational unit or span across different organizations. The process could involve various activities, interactions with other processes, and may be automated or manual. (Guide to Cloud Computing for Business and Technology Managers, 2015, pp. 212-213)

* *Workflow:* Workflow refers to the automation of business processes, either in whole or

part, where tasks, information, or documents are passed from one participant to another according to a set of procedural rules. It ensures that the flow of work within the process is structured, managed, and follows predefined steps. Workflow systems provide transparency, coordination, and efficiency in managing processes, ensuring tasks are executed as per defined procedures. (Guide to Cloud Computing for Business and Technology Managers, 2015, pp. 213-214)

**3. Describe the 5 Management Services in Cloudware Operations and Management.**

The 5 management services are:

1. *Deployment and Configuration:* This service simplifies the process of deploying and configuring applications in the cloud. It automates the design, management, and deployment stages, reducing complexity and administrative burdens. Tools like configuration management frameworks help maintain consistent server and application configurations. (Guide to Cloud Computing for Business and Technology Managers, 2015, p. 374)
2. *Monitoring and Reporting*: Monitoring ensures that the performance, availability, and SLA adherence of cloud systems are tracked. It produces reports and alerts when SLAs are met or breached, helping maintain system health and efficiency. (Guide to Cloud Computing for Business and Technology Managers, 2015, pp. 374-375)
3. *Service-Level Agreements (SLAs) Management:* SLAs define the expected level of service. The management of SLAs involves monitoring service quality, uptime, and responsiveness, ensuring that both providers and users understand the agreed-upon standards and compensation for any service breaches. (Guide to Cloud Computing for Business and Technology Managers, 2015, p. 375)
4. *Metering and Billing:* This service tracks resource usage and generates billing information based on a pay-as-you-go or subscription model. Transparent billing builds user trust and can include costs based on RAM, CPU, bandwidth, and storage. (Guide to Cloud Computing for Business and Technology Managers, 2015, p. 375)
5. *Authorization and Authentication:* This service ensures that only authorized users can access cloud resources. It uses mechanisms like single sign-on (SSO) and tracks user access to maintain security, especially in public cloud environments. (Guide to Cloud Computing for Business and Technology Managers, 2015, p. 376)

# References

Guide to Cloud Computing for Business and Technology Managers. (2015). In V. Kale, *Guide to Cloud Computing for Business and Technology Managers.* Boca Raton, FL: CRC Press.