CHAPTER 5
CONCLUSION

5.1. Conclusion

In conclusion, the successful implementation of the Virtual Data Center using AWS and Datadog has demonstrated the effectiveness of cloud-based solutions in managing and monitoring IT infrastructure. The thesis provided a comprehensive overview of the necessary steps to establish a VDC, from initial configuration to final deployment and monitoring. The results of this implementation underscore the benefits of using cloud services like AWS for creating scalable, flexible, and secure IT environments. Moreover, the integration of Datadog has proven to be an invaluable asset, offering real-time insights and analytics that significantly enhance the VDC's operational efficiency. The outcomes of this thesis affirm that with careful planning and execution, it is possible to create a robust VDC that not only meets current demands but is also well-prepared for future challenges and expansions. This thesis contributes to the growing body of knowledge on cloud computing and IT infrastructure management, providing a solid foundation for future research and practical applications in the field.

5.2. Future Work

The future work for this thesis aims to further enhance the VDC's capabilities by focusing on several key areas. First, the implementation of a more sophisticated backup and disaster recovery plan is crucial to ensure data resilience and operational continuity in the event of failures. Additionally, exploring the use of advanced automation tools such as AWS CloudFormation or Terraform could streamline the deployment process, making the VDC even more efficient and reducing the potential for human error. Another important area for future work is the expansion of the VDC’s scalability features. By integrating more AWS services, such as AWS Lambda for serverless computing and Amazon RDS for advanced database management, the VDC can better accommodate future growth and varying workloads. Moreover, as

cybersecurity threats continue to evolve, it is imperative to implement more robust security protocols, including automated compliance checks and regular security audits. These enhancements will not only strengthen the VDC's current operations but also ensure it remains adaptable and secure in the face of future technological changes.