**BỘ GIÁO DỤC VÀ ĐÀO TẠO**

**TRƯỜNG ĐẠI HỌC NHA TRANG**

**KHOA CÔNG NGHỆ THÔNG TIN**

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**BÁO CÁO NHÓM**

**TIẾNG ANH CHUYÊN NGÀNH CÔNG NGHỆ THÔNG TIN**

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**CLOUD COMPUTING**

In recent years, cloud computing has become a significant trend in the digital revolution. This technology enables users to access shared computing resources via network connectivity easily, anytime, anywhere, on demand[1]. It has rapidly evolved into an essential platform in various fields such as business, healthcare, education, and finance. As digital transformation accelerates, cloud computing helps reduce costs, scale flexibly, increase speed, enhance performance, improve security, ensure reliability, and optimize productivity[2]. Organizations leverage this technology to improve operations, strengthen security, and support remote work.

**Cloud computing** is a model for providing on-demand access to a shared pool of computing resources over the Internet. These resources encompass a wide range of computing-related elements, such as software, services, and hardware, and are located on virtual servers (the cloud) on the network. Cloud computing works by granting users the ability to upload and download stored information. We can access data from anywhere, users are provided with a large initial storage capacity at a very low cost[3].

Cloud computing models offer diverse solutions. **Public Cloud** services, like AWS, Google Cloud, and Azure, are accessible to the public. **Private Cloud** provides exclusive infrastructure for individual organizations, ensuring enhanced security. **Hybrid Cloud** combines Public and Private Clouds, optimizing performance and costs. Finally, **Multi-Cloud** employs multiple cloud platforms to minimize dependency on a single provider and maximize flexibility. These models cater to various business needs effectively.

Cloud computing offers many benefits across different industries. Due to the unlimited storage capacity of the cloud, businesses can now store and analyze big data to gain valuable business insights[4]. This helps companies make better decisions and improve their services. In mobile app development, cloud platforms provide tools and resources for mobile app development, including development environments, testing, and backend services[5]. Cloud computing makes data more accessible, improves efficiency, and supports innovation across all fields.

Cloud Computing is evolving in three main directions. First, artificial intelligenceand machine learning integration enhances performance with ready-made services like image recognition, natural language processing, and personalized user experiences. Second, Edge Computing reduces latency and boosts processing speed, crucial for autonomous vehicles, healthcare, and finance, by leveraging distributed data centers to process data closer to the source. Third, Serverless Computing eliminates infrastructure management, allowing businesses to pay only for usage, scale flexibly, and reduce costs with services like AWS SageMaker, enabling model deployment without infrastructure concerns[6].

In the digital age, Cloud Computing is very important for businesses and technology. It gives people good jobs and high salaries. But it also has challenges, like fast-changing technology and security problems[7]. To succeed, IT workers need to keep learning and improving their skills. In the future, Cloud Computing will continue to grow and become even more important in daily life. It will help businesses work faster and better, giving people who learn Cloud Computing more chances to succeed in their careers[8].

**Tài Liệu Tham Khảo**

[1].<https://vnpt.com.vn/doanh-nghiep/tu-van/dien-toan-dam-may-la-gi.html> (VNPT, 20/07/2021,Điện toán đám mây là gì? Đặc điểm, phân loại & lợi ích).

[2].<https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/what-is-cloud-computing> (Microsoft Azure, 05/04/2022 ,What is cloud computing?).

[3].<https://viettelidc.com.vn/tin-tuc/cam-nang-cloud-cach-thuc-hoat-dong-cua-dien-toan-dam-may> (Viettel IDC, 02/12/2021, ​[Cẩm nang Cloud] Cách thức hoạt động của Điện toán đám mây).

[4]. <https://www.simplilearn.com/applications-of-cloud-computing-article> (Simplilearn, Sep 24, 2024, 7 Most Popular Applications of Cloud Computing : All You Need to Know).

[5]. <https://www.nwkings.com/applications-of-cloud-computing> (Nwkings, November 11, 2023, Applications of Cloud Computing: A Comprehensive Guide).

[6].<https://fptcloud.com/ai-va-cloud-su-ket-hop-tao-nen-tuong-lai-cong-nghe/>(FPT CLOUD, 25/02/2025, AI và Cloud: Tương lai của AI trên nền tảng Cloud).

[7].<https://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-145.pdf> (September 16, 2011, The NIST Definition of Cloud Computing, National Institute of Standards and Technology).

[8]. <https://industri.fatek.unpatti.ac.id/wp-content/uploads/2019/03/210-Cloud-Computing-Sandeep-Bhowmik-Edisi-1-2017.pdf>. (2017, Cloud Computing, Teknik Industri Unpatti, Fakultas Teknik, Universitas Pattimura).