Green IT Document - Instamint

Description of the potential ecological impact

Microsoft, whose Azure service we will be using, has worked extensively in this area. According to some sources, the digital sector is responsible for 3 to 4% of greenhouse gas emissions. The digital sector also requires the extraction of non-renewable resources.

Therefore, there is a real ecological challenge.

This Green IT plan details the strategic measures we will implement to ensure that the project minimizes its environmental impact and adheres to sustainable practices. This document addresses the various components of the project.

Sustainability plan

We evaluated the environmental impact of our project based on its infrastructure and operational needs:

- Servers : three servers are necessary to ensure the application runs without any interruptions.

- Storage: a database with a capacity of 150 GB.

- Domain name and SSL certificate : required to guarantee the security and visibility of the application.

Sustainability strategy

Servers

- Resources optimization : we will opt for low-energy consumption servers and use virtualization to optimize resource utilization. For example, we will use Azure's B-series VMs, which are burstable VMs that provide cost savings while efficiently handling workloads that don't need full performance continuously.

- Efficient cooling : Azure data centers are adequate. Indeed, Microsoft places great importance on ecology. Therefore, they align with our Green IT policy. For example, Microsoft's data centers use free-air cooling, which reduces energy consumption compared to traditional air conditioning systems.

- Renewable energy : whenever possible, we will select "green" data centers. This is fortunate, as by 2025, Azure data centers will be fully powered by renewable energy. For instance, we will choose regions where Azure data centers are already powered by renewable energy.

Storage

- Storage efficiency : energy-efficient storage is preferable to minimize the carbon footprint. For example, we will use Azure Blob Storage, which offers tiered storage options to optimize cost and performance while being energy efficient.

- Archiving and compression : to reduce the required storage space, it is essential to implement archiving and compression strategies. For example, we will use Azure's built-in data compression and archiving features to minimize storage needs.

SSL certificate and domain name

- SSL certificate : we will choose providers who are committed to sustainable practices. For example, we will use SSL certificates from providers like Let's Encrypt, which is a non-profit certificate authority run for the public's benefit.

- Green domain registry : we will prefer domain registrars that support ecological initiatives. For example, we can register our domain with GreenGeeks, which offsets its energy use by 300% with renewable energy.

Training and Awareness

- Continuous training : the development team will receive continuous training on Green IT. For example, we will schedule quarterly training sessions on the latest sustainable practices and technologies.

- Sensitization : we will implement initiatives to raise awareness among all employees about the importance of sustainable practices in the field of information technology. For example, we will hold monthly Green IT awareness workshops and include sustainability tips in our internal newsletters.

Energy Performance Indicators

- Monitoring and reporting : we will establish key indicators to track the energy performance of our project and publish regular reports. For example, we will use Azure Monitor to track energy consumption and carbon emissions of our resources.

- Reduction targets : we will set short, medium, and long-term energy goals to reduce the application's carbon footprint. For example, our short-term goal is to reduce energy consumption by 10% within the first year, our medium-term goal is a 25% reduction within three years, and our long-term goal is to achieve carbon neutrality within five years.

Conclusion

By integrating these Green IT practices, we commit to reducing the environmental impact of our NFT web application project while ensuring optimal and secure performance. We firmly believe that sustainability and innovation can go hand in hand to create responsible technological solutions. For example, our use of Azure's green data centers and commitment to continuous improvement in energy efficiency will ensure that Instamint is both a leader in the NFT space and a model for sustainable technology.