Postgraduate Diploma

Monitoring and Backup Management
of Cloud Infrastructures

tech global
university

![tech global university logo]

Postgraduate Diploma
Monitoring and Backup Management of Cloud Infrastructures

» Modality: **online**
» Duration: **6 monthst**
» Certificate: **TECH Global University**
» Credits: **18 ECTS**
» Schedule: **at your own pace**
» Exams: **online**

Website: **www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-monitoring-backup-management-cloud-infrastructures**

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01
Introduction

Nowadays, companies are required to meet very high levels of security and compliance, which make it essential to have an efficient monitoring and backup strategy. Many of them demand specialized professionals in these two areas, to help meet business objectives, which is why TECH has created this degree. A curriculum designed to provide students with the skills and competencies necessary to comply with regulations on availability, integrity and confidentiality. In addition, which delves into topics such as Cloud Storage, Cloud Server Administration or Types of Backup Services, among others. All this in a comfortable 100% online mode and with the most updated and dynamic theoretical and practical content.

Become an expert in Monitoring and Backup Management of Cloud Infrastructures, with no time limits and no travel"

Nowadays, companies have to be aware of demanding security and compliance requirements, which make it essential to have an optimal monitoring and backup strategy. This ensures the correct operation of systems and services, as well as the protection of data against possible losses, accidents or any other inconveniences that may arise. And this is what has become so necessary to professionals in the area of Cloud Infrastructures who are specialized in this type of tools and security measures.

For this reason, TECH's team of experts has designed a Postgraduate Diploma in Monitoring and Backup Management of Cloud Infrastructures, with the aim that students develop the necessary skills and competencies to establish a backup and monitoring strategy with the maximum possible efficiency. This syllabus addresses topics such as Cloud Storage Security, Database Infrastructure, Cloud Service Configuration, Types of Monitoring or Total, Incremental and Differential Backup, among other relevant aspects.

And all this, in a 100% online mode that gives total comfort to the student, allowing them to organize their schedules and studies without any limitation or need to travel. In addition, with a Study Plan that has been designed based on the most efficient educational methodology, with the best multimedia contents and the most updated information possible. It is worth mentioning the possibility of accessing all the content from anywhere and with any device with internet connection, whether it is a computer, tablet or cell phone.

This **Postgraduate Diploma in Monitoring and Backup Management of Cloud Infrastructures** contains the most complete and up-to-date program on the market. The most important features include:

- The development of case studies presented by experts in Monitoring and Backup Management of Cloud Infrastructures

- The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice

- Practical exercises where self-assessment can be used to improve learning

- Its special emphasis on innovative methodologies

- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments

- Content that is accessible from any fixed or portable device with an Internet connection

Learn to fully master the different tools and services offered by the cloud for the most efficient implementation of Cloud Infrastructures"

Acquire new skills and apply your knowledge about the different strategies and services in real case studies"

You will be prepared to deal with any incident by establishing the most appropriate monitoring strategies for each case.

Learn how to detect weak points to improve the Cloud Infrastructure while the business evolves.

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

02
Objectives

The objective of this Postgraduate Diploma in Monitoring and Backup Management of Cloud Infrastructures is to develop the student's needs, so that he/she is able to make the most of the different tools and techniques with which to monitor and perform backups effectively. All this, thanks to the most complete and updated theoretical and practical contents that can be found in the academic market.

Boost your professional profile and reach your most demanding goals in Monitoring Management of Cloud Infrastructures"

General Objectives

- Develop specialized knowledge about what infrastructures are and what motivations exist for their transformation to the cloud

- Acquire the skills and knowledge necessary to implement and manage IaaS solutions effectively

- Acquire specialized knowledge to add or remove storage and processing capacity quickly and easily, enabling you to adapt to fluctuations in demand

- Examine the scope of Network DevOps, demonstrating that it is an innovative approach for network management in IT environments

- Understand the challenges faced by an enterprise in Cloud governance and how to address them

- Use security services in Cloud environments such , as Firewalls, SIEMS and threat protection , to secure applications and services

- Establish best practices in the use of Cloud Services and the main recommendations when using them

- Increase user efficiency and productivity: by enabling users to access their applications and data from anywhere and on any electronic device, VDI can improve user efficiency and productivity

- Gain specialized knowledge about Infrastructure as Code

- Identify key points to demonstrate the importance of investing in backup and monitoring in organizations
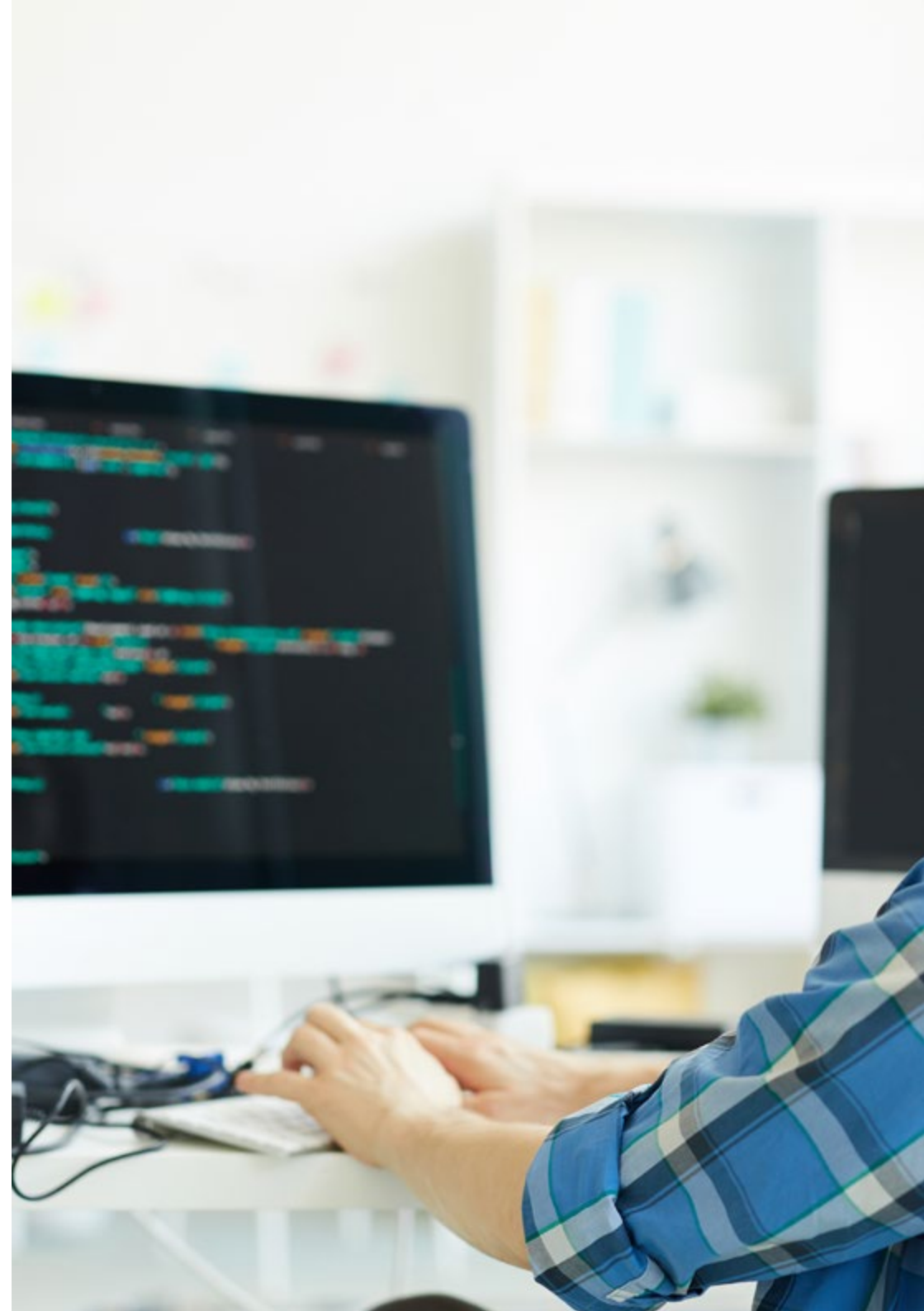
Specific Objectives

Module 1. Storage and Databases in Cloud Infrastructures

- Determine the characteristics and advantages of cloud storage, the different storage options in the cloud(public, private,, hybrid) and the selection of the appropriate storage option

- Develop specialized knowledge about cloud databases, advantages and disadvantages of databases in by the cloud, the different cloud database options (relational, non-relational) and how to select the right option

- Examine the design and architecture of cloud storage and databases: the design principles of cloud storage and databases, Security Architectures Storage and Databases in by the cloud and common design patterns

- Manage cloud storage and databases: how to create, manage and monitor cloud storage and databases, how to backup and recover data in the event of loss

- Analyze security and privacy in the cloud: how to protect stored data and databases in the cloud, privacy and security policies and regulations in the cloud

- Compile use cases and examples of cloud storage and databases: examples of how cloud storage and databases are used different use cases of big data management, real-time data analytics, and integration of data from different sources

- Addressing scalability and performance in the cloud and how to optimize them in cloud applications

Module 2. Services Adoption in Cloud Infrastructures

- List the different computing services in each of the main Cloud providers
- Substantiate the advantages of interoperability between services
- Acquire the skills necessary to deploy the application in Cloud and provide it with additional features by incorporating new services
- Determine how to make an application resilient thanks to auto-scaling

Module 3. Monitoring and Backup of Cloud Infrastructures

- Determine how to establish a backup strategy and a monitoring strategy
- Establish the most demanded services and usage of each one of them
- Identify the types of backup and its uses
- Determine a robust backup strategy that meets business objectives
- Develop a business continuity plan
- Identify the types of monitoring and the purpose of each one
- Generate a proactive attitude towards incidents by establishing a scalable monitoring strategy
- Apply the different strategies on real use cases
- Identify improvement points in order to evolve the environments as the business evolves

You will achieve your objectives in a few months, thanks to the most precise content and the most advanced technologies in terms of teaching in Cloud Infrastructures"

03

Course Management

In order to offer the highest quality education possible in today's academic market, TECH has relied on professionals with an outstanding career in the labor and teaching field, forming an excellent team of experts in this field. All this, with the aim of multiplying the possibilities for students to achieve their goals in the field of Monitoring and Backup Management.

Master all aspects of the syllabus, thanks to the best teaching team and the wide variety of practical activities available on the Virtual Campus"

Management

Mr. Bressel Gutiérrez-Ambrossi, Guillermo

- Specalist in Systems Administration and Computer Networks
- Storage and SAN Network Administrator at Experis IT (BBVA)
- Network Administrator at IE Business School
- Graduate in Computer Systems and Network Administration at ASIR (ASIR)
- Ethical Hacking course at OpenWebinar
- Powershell course at OpenWebinar

Professors

Mr. Seijo Serrao, Pablo

- Storage technician for a consulting company providing service to BBVA
- Computer Systems Technician
- Senior Computer Systems Administration Technician

Mr. Del Río Miguel, Rubén

- Backup and Storage Administrator at EUIPO
- Systems Technician in backup department at ST Process and System Technician
- Administration of networked computer systems

Mr. Intriago Narváez, Kevin

- Datacenter & Cloud Architect at Claro Ecuador
- IT Infrastructure Engineer at Claro Ecuador
- Senior IT Infrastructure Engineer at Credimatic
- Infrastructure Administrator at Solvesa
- Front Massive Technical Support
- Computer Systems Engineer at the University of Guayaquil
- Bachelor's Degree in Networking and Operating Systems from Escuela Superior Politécnica del Litoral
- Master's Degree in Management Information Systems from Escuela Superior Politécnica del Litoral

04
Structure and Content

This Syllabus has a structure and content of the highest quality and precision, which has been designed by renowned experts in the field, whose professional experiences allow them to guarantee the development of skills and competencies on the part of the students. All this has resulted in comprehensive multimedia material and up-to-date information, which has been created in updated information, which has been created based on the requirements of the most efficient pedagogical methodology, Relearning, in which TECH is a pioneer.

"*A syllabus tailored to your needs and with which you will be able to deepen your knowledge of all types of Monitoring and Backup Services from day one*"

Module 1. Storage and Databases in Cloud Infrastructures

1.1. Cloud Storage Infraestucture
    1.1.1. Cloud Storage Fundamentals
    1.1.2. Cloud Storage Advantages
    1.1.3. Operation
1.2. Types of Cloud Storage
    1.2.1. SaaS
    1.2.2. IaaS
1.3. Cloud Storage Use Cases
    1.3.1. Data Analysis
    1.3.2. Backup and Archiving
    1.3.3. Software Development
1.4. Cloud Storage Security
    1.4.1. Security in the Transport Layer
    1.4.2. Storage Security
    1.4.3. Storage Encryption
1.5. Cloud Storage Analysis
    1.5.1. Profitability
    1.5.2. Agility and Scalability
    1.5.3. Administration
1.6. Infrastructure of Cloud Database
    1.6.1. Fundamentals of Databases
    1.6.2. Analysis of Databases
    1.6.3. Classification of the Databases in the Cloud
1.7. Types of Infrastructure of Cloud Database
    1.7.1. Relational Databases
    1.7.2. Non-SQL Databases
    1.7.3. Datawarehouse Databases
1.8. Cloud Database Infrastructure Use Cases
    1.8.1. Data Storage
    1.8.2. Data Analysis. IA.ML
    1.8.3. Big Data
1.9. Security/Safety of Infrastructure of Cloud Database
    1.9.1. Access Control ACL, IAM, SG
    1.9.2. Data encryption
    1.9.3. Audits

1.10. Migration and Backup of Cloud Database Infrastructures
    1.10.1. Backups of Databases
    1.10.2. Migration of Databases
    1.10.3. Optimization of Databases

Module 2. Services Adoption in Cloud Infrastructures

2.1. Configuration of a Cloud Server
    2.1.1. Hardware Configuration
    2.1.2. Software configuration
    2.1.3. Network and Security/Safety Configuration
2.2. Cloud service configuration
    2.2.1. Assigning permissions to my cloud server
    2.2.2. Configuring security rules
    2.2.3. Deploying a cloud service
2.3. Administration of a cloud server
    2.3.1. Management of storage units
    2.3.2. Network Management
    2.3.3. Backup management
2.4. Persistence
    2.4.1. Decoupling our cloud service
    2.4.2. Persistence service configuration
    2.4.3. Integration of the BB.DD. with our cloud service
2.5. Autoscaling
    2.5.1. Image generation of our server
    2.5.2. Creation of Autoscaling Groups
    2.5.3. Definition of automatic scaling rules
2.6. Balancing services
    2.6.1. Balancing Services
    2.6.2. Generation of a load balancer
    2.6.3. Connecting the load balancer to our cloud service
2.7. Content Delivery Services
    2.7.1. Content Delivery Services
    2.7.2. Content delivery service configuration
    2.7.3. CDN integration with our cloud service

Module 3. Monitoring and Backup of Cloud Infrastructures

Access all content and a wealth of additional material on Cloud Services Configuration, from anywhere and with any device with an internet connection"

05
Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

"*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world*"

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

Our program prepares you to face new challenges in uncertain environments and achieve success in your career"

The case method has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

In 2019, we obtained the best learning results of all online universities in the world.

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.

30%

10%

8%

tech

20%

25%

4%

3%
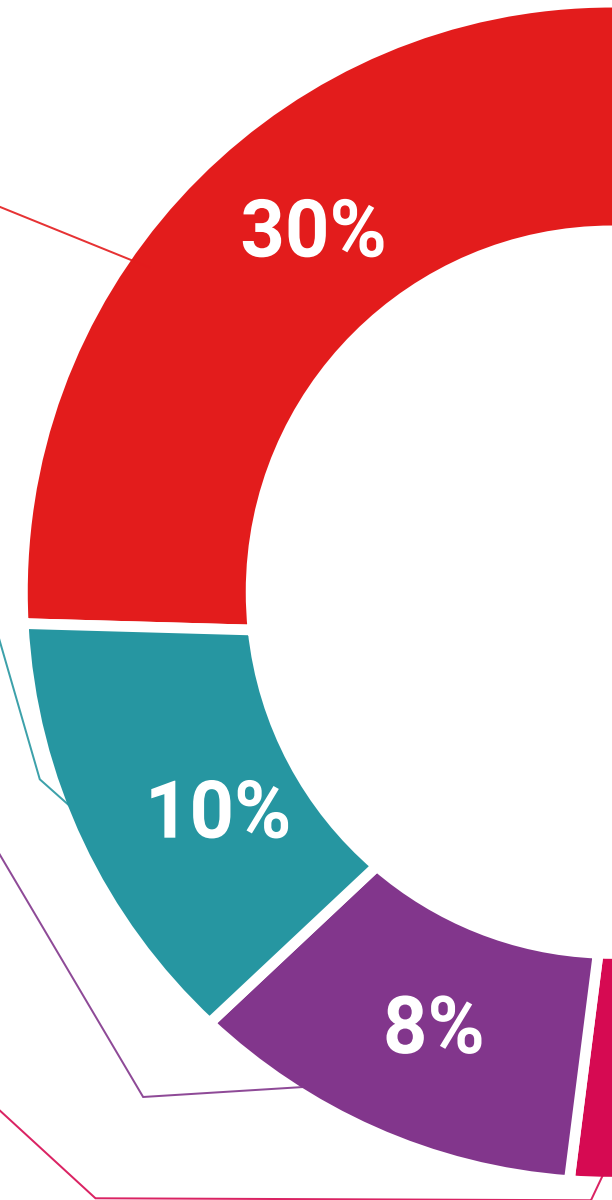
Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

06

Certificate

The Postgraduate Diploma in Monitoring and Backup Management of Cloud Infrastructures guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This program will allow you to obtain your **Postgraduate Diploma in Monitoring and Backup Management of Cloud Infrastructures** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.
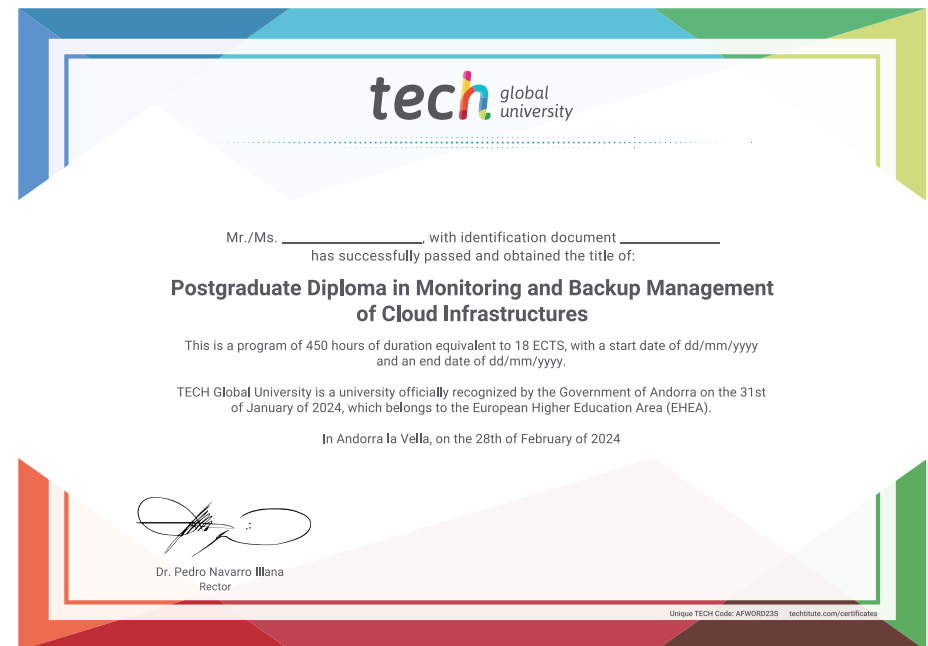
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Monitoring and Backup Management of Cloud Infrastructures**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**

tech global university

Mr./Ms. _____, with identification document _____ has successfully passed and obtained the title of:

Postgraduate Diploma in Monitoring and Backup Management of Cloud Infrastructures

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

Unique TECH Code: AFWORD23S   techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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