Postgraduate Certificate
Network Design and Management in Cloud Infrastructures

tech global university

Postgraduate Certificate
Network Design and Management Cloud Infrastructures

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

Website: **www.techtitute.com/pk/information-technology/postgraduate-certificate/network-design-management-cloud-infrastructures**

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01
Introduction

The application of networking, programming and DevOps tools is applied in the field of Cloud Infrastructures, with the aim of improving the efficiency and scalability of networks. In order to implement and manage these networks in Cloud Environments, the knowledge and skills of professionals in this area are required, who know how to get the most out of them. This is the reason why TECH has created a program that seeks to develop the skills and competencies of students in areas such as Network DevOps, Networking Fundamentals, DNS Tools or Cloud Network Security. All this in a convenient 100% online mode and with the possibility of accessing all the content from the first day.

Deepen your knowledge about Networking, Programming and DevOps Tools, with the most complete and dynamic program"

Cloud infrastructures have multiple advantages that conventional physical infrastructures do not have, but they require specific capabilities to get the most out of them. The Network DevOps discipline combines Networking and DevOps skills, with the aim of improving the efficiency and scalability of networks. Because of this, more and more companies require professionals with the most advanced knowledge and skills to implement, design and manage networks in cloud environments efficiently.

And this need is what has led TECH to add to its wide range of offerings a Postgraduate Certificate in Network Design and Management in Cloud Infrastructures. This program aims to ensure the acquisition of very advanced skills in supervision, administration, monitoring and auditing of networks in cloud environments, through an agenda that covers multiple topics such as the Fundamentals of NetOps, its Tools and Software or Security in this area.

All this, offering the most complete content and the most updated information, in a 100% online mode that gives total freedom of organization of studies and schedules to the student. In addition, with the possibility of accessing all the content from anywhere, without the need to travel and with any device with internet connection.

This **Postgraduate Certificate in Network Design and Management in 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 Network Design and Management in 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

Acquire the skills and knowledge you need to excel in the Cloud Infrastructure industry"

Get to deploy and manage networks in cloud environments in an efficient and scalable way"

Learn about the requirements needed to master the NetOps discipline and meet them all in just 6 weeks.

Learn how to optimally use monitoring and auditing tools to optimize network security in cloud environments.

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 Certificate in Design and Management of Networks in Cloud Infrastructures is to provide students with all the knowledge and skills necessary to master this area and to be able to face a promising future as experts in NetOps, Network Management, Security and Monitoring in cloud environments. All this through the most innovative theoretical and practical materials in the academic market.

The goal is to give you the tools to face a promising future in Network Management in cloud environments, comfortably and quickly"

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 eventos

Specific Objectives

◆ Develop the concepts and principles of Network DevOps and its application in Cloud environments.

◆ Determine the requirements needed to implement Network DevOps in Cloud environments

◆ Use the relevant tools and software for Network DevOps

◆ Establish how to implement and manage internal network services in cloud environments, such as VPC and subnetting

◆ Compile the boundary network services available in Cloud environments and how they are used to connect Cloud and on-premise networks

◆ Substantiate the importance of DNS usage in Cloud environments and how to implement hybrid and multi-tenant network connectivity

◆ Implement and manage content delivery services in cloud environments, such as CDNs and WAFs

◆ Examine the important aspects of security in Cloud networks and how security measures can be implemented in these environments

◆ Monitor and perform network audits in Cloud environments to ensure availability and security

You will achieve all your objectives in the field of Cloud Infrastructures, thanks to the most innovative tools in education"

03
Course Management

This Postgraduate Certificate in Network Design and Management in Cloud Infrastructures has a highly qualified team with extensive experience in the sector, to ensure the total satisfaction of the student's needs. Thus, it offers a curriculum designed with the highest quality materials and has the latest technologies in teaching.
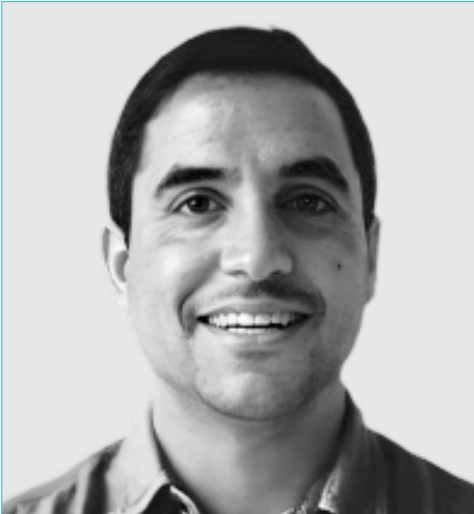
> *Succeed with the best team of experts in Network Design and Management in cloud environments thanks to TECH"*

Management

Mr. Casado Sarmentero, Iván

- Head of DevOps at TRAK
- IT Director at Madison Experience Marketing
- Infrastructure and Telecommunications Officer at Madison Experience Marketing
- Operations and Support Officer at Madison Experience Marketing
- IT Systems Administrator at Madison Experience Marketing
- Master in Leadership and Team Management in the Chamber of Commerce of Valladolid
- Higher Level Educational Cycle in Computer Applications Development at IES Galileo

Professors

Mr. Fuente Alonso, Rubén

- Responsible for Security Operations Center at Madison Experience Marketing
- Founding Partner and President of the Asociación Informática Palencia Kernel Panic
- Network and Systems Security Administrator at Entelgy Innotec Security
- Network and Systems Security Administrator at Entelgy Innotec Security
- PartyLans Network Administrator in several associations
- Higher University Course on Cybersecurity at Rey Juan Carlos University
- CCNA R&S and CCNA Security at Cisco Networking Academy
- TCP/IP Network Design at IBM
- Senior Technician in Computer Systems Administration at CIFP Palencia

Structure and Content

The syllabus of this certificate has been structured and created by the renowned experts in the field that make up the TECH team. All the information and activities have been meticulously designed by these teachers, based on their extensive experience and the fundamentals of the most efficient pedagogical methodology, Relearning. In this way, the best possible assimilation of the essential concepts can be guaranteed, as well as complete, accurate and updated contents.

"
Enroll now and enjoy the best material and the latest information in the Network DevOps field"

Module 1. Network DevOps and Network Architectures in Cloud infrastructures

1.1.   Nerwork DevOps (NetOps)
    1.1.1.   Nerwork DevOps (NetOps)
    1.1.2.   NetOps Methology
    1.1.3.   NetOps Benefits
1.2.   Network DevOps Fundamentals
    1.2.1.   Networking Fundamentals
    1.2.2.   OSI TCP/IP model, CIDR and Subnetting
    1.2.3.   Main Protocols
    1.2.4.   HTTP responses
1.3.   Tools and software for Network DevOps
    1.3.1.   Network layer tools
    1.3.2.   Application layer tools
    1.3.3.   DNS Tools
1.4.   Networking in Cloud Environments: Internal network services
    1.4.1.   Virtual Networks
    1.4.2.   Subnetworks
    1.4.3.   Routing tables
    1.4.4.   Availability zones
1.5.   Networking in Cloud Environments: Borders network services
    1.5.1.   Internet Gateway
    1.5.2.   NAT Gateway
    1.5.3.   Load Balancing
1.6.   Networking in Cloud Environments: DNS
    1.6.1.   DNS Fundamentals
    1.6.2.   Cloud DNS Services
    1.6.3.   HA / LB via DNS
1.7.   Hybrid / Multitenant Network Connectivity
    1.7.1.   Site to Site VPN
    1.7.2.   VPC Peering
    1.7.3.   Transit Gateway / VPC Peering

Access all the material and a wide variety of additional information to broaden your knowledge in the aspects of the course that interest you most"

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%

20%

25%

4%

3%
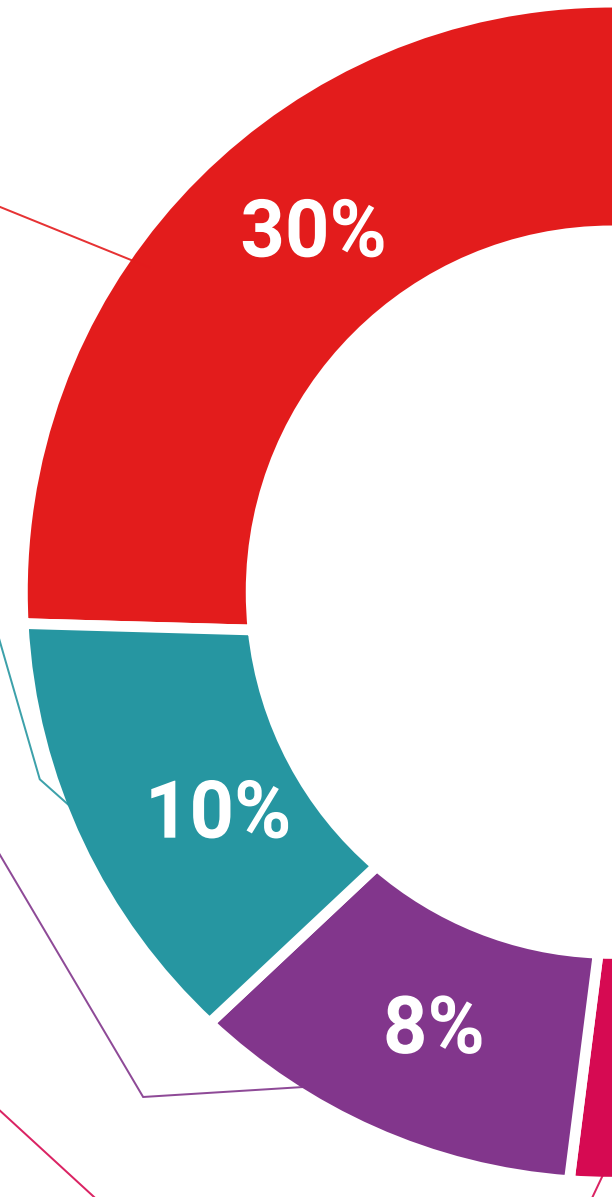
Case Studies

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 Certificate in Network Design and Management in Cloud Infrastructures guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 Certificate in Network Design and Management in 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 Certificate in Network Design and Management in Cloud Infrastructures**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**

tech global university

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

Postgraduate Certificate in Network Design and Management in Cloud Infrastructures

This is a program of 180 hours of duration equivalent to 6 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 certificate issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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