Masterclass Digital Transformation

Duration: 5 Days   Course Code: GKMDT

Overview:

In this Masterclass Digital Transformation, the latest trends in IT are discussed. Rapid changes in IT technology, Cloud and IT processes demand that you adjust before you are lagging behind your competitors.

This training consists 5 sessions, which also can be booked separately (by using the course code between brackets):
Day 1: Latest trends in Software development: API's, Microservices, Cloud-native – Docker and serverless (GKAMCS)
Day 2. Latest trends in Cloud Computing: Hybrid Cloud, Distributed Cloud and Edge Computing (GKHCDCEC)
Day 3. Latest trends in IT: Introduction AI and Machine Learning (GKAIML)
Day 4. Latest trends in IT security: Zero Trust Network Access (ZTNA), CARTA and SDP (GKZTNACS)
Day 5. Latest trends in Cloud security: CASB, SD-WAN and SASE (GKCSS)

Target Audience:

Anyone who wants to know about the latest trends in IT

Objectives:

- After completing this course you should be able to:

- Understand the main characteristics of SOA: loosely Coupling, the concept of a contract for your interface, reusability

- Explain the features of a RESTful API and Microservice

- Identify the challenges with APIs

- Understand the need for a Dynamic Service Discovery and for an API Gateway

- Compare an API with a Microservice

- Understand the advantages and pitfalls of Docker - Kubernetes

- Know when to choose for an API, Microservice, Docker, Service-Mesh or Serverless design

- Explain the shift in responsibilities with the move to the cloud

- Understand Security is a shared responsibility in the cloud

- Understand the complexity of the Hybrid Cloud

- Identify the issues with cost management

- Understand the Cloud security and high availability features

- Explain the danger of Shadow IT and the function of a Cloud Access Security Broker (CASB)

- Explain Cloud automation and Policy based automation and the concept of Infrastructure as Code

- Understand the need for the distributed cloud and Points of Presence (PoP).

- Understand the need for Zero Trust Network Access

- Identify Zero Trust solutions as Software Defined Perimeter and Micro-segmentation

- Describe UEBA and the relationship with CARTA

- Identify the importance of Artificial Intelligence and Machine Learning in IT security

- Understand the architecture of SDP

- Identify the critical factors when choosing a SDP product

- Identify the features of a Cloud Access Security Broker (CASB)

- Explain the difference between API only and first-gen, next-gen multimode CASBs

- Compare the different implementations of a CASB solution (log collection, packet capture, Cloud APIs, proxies and AJAX-VM)

- Understand the problem with proxy solutions

- Understand the decisive factors when buying a CASB solution

- Describe the features of SD-WAN

- Identify the mandatory services of a SASE solution

- Understand the architecture and implementation of a SASE solution

- Compare SASE vendors PoPs and network offerings (global private backbone)

- Understand the essentials services offered by a SASE solution:

- Software-defined perimeter (SDP) en Zero Trust network access

- Understand the importance of Edge Computing

- Understand why now the time is to start with AI/ML: the 7 key enablers

- Explain the Data Science fundamentals

- Identify the basic Machine Learning techniques (supervised, unsupervised, deep learning etc.)

- Identify which tools are available for Machine Learning and AutoML

- Explain implemenation of Machine Learning

- Understand the Risks and ethics of AI and Machine Learning

(ZTNA)

- Secure web gateway (SWG) versus Firewall as a service (FWaaS) versus Nextgen firewall (NGFW) versus Web Application firewall (WAF)

- Next-generation antimalware (NGAM)

- Intrusion Detection Systems (IDS) versus Intrusion prevention system (IPS)

- Remote Browser Isolation (RBI)

- Explain the role of Deep Packet Inspection (DPI)

Prerequisites:

To join this course basic knowledge of IT is required.

For non-IT professionals it is recommended to follow the training:
IT Essentials (for non IT-Professionals (GKITESS)

Content:

- What are the advantages and disadvantages of an API and a Microservice?
- What are the requirements for an application to run in an application container
- What is Docker and Kubernetes
- The *Microservices hierarchy of needs*
- Advantages and pitfalls of a Service Mesh
- What is Serverless?
- The shift in responsibilities
- Security: a shared responsibility
- Complexity of the Hybrid Cloud
- Shadow IT and CASB
- Cloud automation: Policy based automation, Infrastructure as Code, the Shift Left
- Self healing and auto-scaling
- Why the Distributed Cloud
- What is Edge Computing
- Cloud mythes
- The fundamentals of AI and Machine Learning

- Terminology AI and Machine Learning (Deep learning, General AI, Narrow AI, Singularity etc. etc)
- Basic Machine Learning techniques (supervised, unsupervised etc.)
- Which code libraries are available for the different Machine Learning techniques
- How to start a Machine Learning project in your organization
- Risks and ethics of AI and Machine Learning
- What are the features of Zero Trust Network Access
- How to implement ZTNA
- The future of the internet: Named Data Networking (NDN)
- The features of CARTA: the 7 imperatives of CARTA
- What is SDP and how does it work?
- SDP architecture
- Single Packet Authorization
- Static and dynamic firewalls
- Why do you need a CASB? What does a CASB offer, what are the advantages?
- Architecture CASB, first-gen versus next-gen Multi-mode CASBs
- The different implementations of CASB: log collection, packet capture, Cloud APIs, proxies and AJAX-VM

- What is SD-WAN and Software Defined Networking
- Comparison MPLS and SD-WAN
- Advantages SD-WAN: transport agnostic, tunnel bonding, intelligent routing
- What is SASE
- The problem with Service chaining
- Architecture and implementation: SASE Cloud and SASE Points of Presence (PoP)
- What are the essential components of Networking as a Service and Security as a service:
- Software defined wide area network, SD-WAN
- Software-defined perimeter (SDP) en Zero Trust network access (ZTNA)
- Secure web gateway (SWG) versus Firewall as a service (FWaaS) versus Nextgen firewall (NGFW) versus Web Application firewall (WAF)
- Next-generation antimalware (NGAM)
- Intrusion Detection Systems (IDS) versus Intrusion prevention system (IPS)
- Remote Browser Isolation (RBI)
- The role of Deep Packet Inspection (DPI)
- Recommendations and vendors

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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