

IoT MODULE 02

IoT Technology & Architecture

Arcitura®
CERTIFIED
IoT Architect

OVERVIEW

This course provides a drill-down into key areas of IoT technology architecture and enabling technologies by breaking down IoT environments into individual building blocks via design patterns and associated implementation mechanisms. Layered architectural models are covered, along with design techniques and feature-sets covering the processing of telemetry data, positioning of control logic, performance optimization, as well as addressing scalability and reliability concerns.

The following primary topics are covered:

- Components of an IoT Device (including sensor, actuator, modem, control logic, etc.)
- IoT Platforms, Gateways and Publish-Subscribe Systems
- Device Shadows and Device Shadow Registries
- Trusted Platform Module (TPM) and the Truncated Exponential Back-off Algorithm
- Fundamental Functional Distribution Patterns
- Autonomous Controlling Device Model, Intermediary Controlling Model
- Multi-Gateway Intermediary Controlling Model, Recipient Device Controlling Model
- Telemetry Processing Patterns
- Minimalized Data, Canonical Data Format
- Telemetry Modeling, Intermediary Metadata Provisioning
- Information Transduction and Encoding
- Performance Optimization Patterns
- Observe Messaging, Transport Quality Traffic Profile
- Reconnection Request Regulation, Device Workload Regulation
- Security, Reliability and Utility Patterns
- Radio Transport Encryption, Firmware Integrity Attestation
- Message Bookkeeping, Multimode Communication
- Network-Based Positioning and Triangulation

Duration: 1 Day

TRAINING + CERTIFICATION

This course is part of a training and accreditation program through which official certification can be achieved and for which official training and certification badges can be issued.



www.arcitura.com/iot

eLEARNING + PRINTED STUDY KITS

This Arcitura study kit includes the contents listed below. These course materials are available in full-color printed format, as well as in eLearning subscription format, via online access and offline file download.

- Workbook (2 of 3)
- Exam Preparation Guide (2 of 3)
- Mind Map Poster
- Patterns and Mechanisms Poster
- Flashcards
- Audio Tutor Recording



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EXAM PROCTORING

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	Certified DevOps Specialist	Certified Blockchain Architect	Certified IoT Architect	Certified Containerization Architect	Certified Machine Learning Specialist	Certified Artificial Intelligence Specialist
MODULE 01 Fundamental DevOps	●					
MODULE 02 DevOps in Practice	●					
MODULE 03 DevOps Lab	●					
MODULE 01 Fundamental Blockchain		●				
MODULE 02 Blockchain Technology & Architecture		●				
MODULE 03 Blockchain Technology & Architecture Lab		●				
MODULE 01 Fundamental IoT			●			
MODULE 02 IoT Technology & Architecture			●			
MODULE 03 IoT Technology & Architecture Lab			●			
MODULE 01 Fundamental Containerization				●		
MODULE 02 Containerization Technology & Architecture				●		
MODULE 03 Containerization Technology & Architecture Lab				●		
MODULE 01 Fundamental Machine Learning					●	
MODULE 02 Advanced Machine Learning					●	
MODULE 03 Machine Learning Lab					●	
MODULE 01 Fundamental Artificial Intelligence						●
MODULE 02 Advanced Artificial Intelligence						●
MODULE 03 Artificial Intelligence Lab						●