LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

Master Certificate in Enterprise Network Architecture

Leadership Level

LAPT — London Academy of Professional Training

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Reference IT-NIC-L • IT Centres

UKPRN 10067351 • Registered in England and Wales, company 4984798

6	30	180	430	60%	Lifetime
SUBJECTS	CHAPTERS	CLASSES	TOTAL MARKS	PASS MARK	VALIDITY

AT A GLANCE

REFERENCE	**IT-NIC-L**
AWARD	**Certificate**
ASSESSMENT	**430 marks — 258 to pass (60%)**
PREREQUISITES	**None**
VALIDITY	**Lifetime**
AWARDING BODY	**LAPT — London Academy of Professional Training**

CURRICULUM

1 Advanced Network Design

5 chapters · 30 classes · **85 marks**

• 1 Fundamentals of Enterprise Network Architecture — 6 classes

- › 1.1 Understanding Enterprise Network Architecture Basics
- › 1.2 Analyzing Key Components of Enterprise Networks
- › 1.3 Exploring Network Topologies and Design Models
- › 1.4 Evaluating Network Design Considerations and Best Practices
- › 1.5 Integrating Security into Network Architecture
- › 1.6 Applying Enterprise Network Architecture Strategies

• 2 Advanced Network Design Principles and Models — 6 classes

- › 2.1 Understanding Advanced Network Design Principles
- › 2.2 Exploring Network Design Models and Frameworks
- › 2.3 Analyzing Scalability and Performance in Network Design
- › 2.4 Implementing Security Strategies in Network Architectures
- › 2.5 Integrating Virtualization Technologies in Network Design
- › 2.6 Evaluating Case Studies of Advanced Network Designs

• 3 Integration of Cloud Services within Enterprise Networks — 6 classes

- › 3.1 Understanding Cloud Service Models (IaaS, PaaS, SaaS)
- › 3.2 Exploring Benefits and Challenges of Cloud Integration
- › 3.3 Analyzing Network Requirements for Cloud Services
- › 3.4 Designing Hybrid Cloud Network Architectures
- › 3.5 Implementing Security and Compliance in Cloud Networks
- › 3.6 Evaluating Performance Metrics for Cloud-integrated Networks

• 4 Designing for Emerging Technologies and Trends — 6 classes

- › 4.1 Understanding Emerging Technologies in Network Design
- › 4.2 Analyzing the Impact of IoT on Network Architectures
- › 4.3 Integrating AI and Machine Learning in Network Solutions
- › 4.4 Designing Networks for Cloud and Edge Computing
- › 4.5 Evaluating Security Challenges in Next-Gen Networks
- › 4.6 Implementing Scalability for Future Network Demands

• 5 Leadership and Strategic Decision-Making in Network Architecture — 6 classes

- › 5.1 Understanding Leadership Roles in Enterprise Network Architecture
- › 5.2 Exploring Strategic Decision-Making Frameworks
- › 5.3 Analyzing the Impact of Leadership on Network Design Strategies
- › 5.4 Leveraging Leadership Styles for Effective Network Solutions
- › 5.5 Evaluating Strategic Decisions in Complex Network Scenarios
- › 5.6 Leading Change Management in Network Architecture

2 Emerging Network Technologies

5 chapters · 30 classes **65 marks**

- **1 Foundations of Emerging Network Technologies** — 6 classes
  - 1.1 Understanding Emerging Network Technologies
  - 1.2 Exploring Key Trends in Network Development
  - 1.3 Analyzing the Role of Cloud Computing in Networking
  - 1.4 Examining the Impact of 5G on Network Infrastructure
  - 1.5 Assessing the Integration of IoT in Modern Networks
  - 1.6 Evaluating Network Security Challenges in Emerging Technologies
- **2 Cloud-Based Network Infrastructures** — 6 classes
  - 2.1 Understanding Cloud-Based Network Architectures
  - 2.2 Identifying Key Features of Cloud Networks
  - 2.3 Exploring Cloud Service Models for Networking
  - 2.4 Comparing Public, Private, and Hybrid Cloud Infrastructures
  - 2.5 Analyzing Security in Cloud-Based Networks
  - 2.6 Planning and Designing Cloud Network Solutions
- **3 Software-Defined Networking and Automation** — 6 classes
  - 3.1 Understanding Software-Defined Networking Concepts
  - 3.2 Exploring the Architecture of Software-Defined Networks
  - 3.3 Identifying Benefits and Challenges of SDN Implementation
  - 3.4 Analyzing Automation in Network Management
  - 3.5 Examining SDN Use Cases and Industry Applications
  - 3.6 Integrating SDN and Automation for Improved Network Efficiency
- **4 Network Security in Emerging Technologies** — 6 classes
  - 4.1 Understanding Emerging Network Technologies
  - 4.2 Exploring Security Challenges in New Network Environments
  - 4.3 Analyzing Vulnerabilities in IoT Networks
  - 4.4 Securing Cloud-Based Network Architectures
  - 4.5 Implementing Blockchain for Network Security
  - 4.6 Applying AI and Machine Learning to Enhance Network Security
- **5 Future Directions in Network Technology Innovation** — 6 classes
  - 5.1 Understanding the Landscape of Emerging Network Technologies
  - 5.2 Exploring Innovations in Network Infrastructure
  - 5.3 Analyzing the Impact of AI and Machine Learning on Network Systems
  - 5.4 Investigating the Role of Edge Computing in Network Evolution
  - 5.5 Assessing the Implications of Quantum Networking
  - 5.6 Developing Strategies for Integrating Emerging Technologies

3 Enterprise Security Management

5 chapters · 30 classes **65 marks**

- **1 Understanding Enterprise Security Fundamentals** — 6 classes
  - 1.1 Exploring Core Concepts of Enterprise Security
  - 1.2 Identifying Common Security Threats and Vulnerabilities
  - 1.3 Assessing Security Risks in Enterprise Networks
  - 1.4 Implementing Effective Security Policies and Standards
  - 1.5 Designing Network Security Architectures
  - 1.6 Evaluating Security Performance and Compliance
- **2 Designing Secure Network Architectures** — 6 classes
  - 2.1 Understanding the Principles of Secure Network Design
  - 2.2 Identifying Network Vulnerabilities and Risks
  - 2.3 Implementing Access Control and Network Segmentation
  - 2.4 Integrating Encryption and Data Protection Techniques
  - 2.5 Designing a Strong Perimeter Defense
  - 2.6 Evaluating and Optimizing Security Architectures
- **3 Implementing Advanced Identity and Access Management** — 6 classes
  - 3.1 Understanding Advanced Identity Frameworks
  - 3.2 Analyzing Authentication Protocols
  - 3.3 Designing Effective Access Control Policies
  - 3.4 Implementing Single Sign-On Solutions
  - 3.5 Exploring Multi-Factor Authentication Techniques
  - 3.6 Evaluating Identity and Access Management Technologies
- **4 Security Threats and Vulnerability Management** — 6 classes
  - 4.1 Identifying Common Security Threats in Enterprise Networks
  - 4.2 Understanding Vulnerabilities and Their Impact on Security
  - 4.3 Analyzing Threat Intelligence for Proactive Defense
  - 4.4 Implementing Risk Assessment Strategies in Vulnerability Management
  - 4.5 Developing Incident Response Plans for Threat Mitigation
  - 4.6 Evaluating and Updating Security Measures Continuously
- **5 Developing Incident Response and Recovery Strategies** — 6 classes
  - 5.1 Understanding the Basics of Incident Response
  - 5.2 Identifying Potential Security Incidents
  - 5.3 Developing Effective Response Strategies
  - 5.4 Crafting Recovery Plans for Business Continuity
  - 5.5 Implementing Communication Protocols during Incidents
  - 5.6 Analyzing and Improving Incident Response Effectiveness

4 Leadership in IT Infrastructure

5 chapters · 30 classes **65 marks**

- **1 Foundations of Leadership in IT Infrastructure** — 6 classes
  - 1.1 Understanding Leadership Principles in IT Infrastructure
  - 1.2 Exploring the Role of Leadership in IT Systems Management
  - 1.3 Analyzing Key Leadership Skills for IT Professionals
  - 1.4 Applying Effective Communication Strategies in IT Teams
  - 1.5 Fostering an Innovative Culture within IT Departments
  - 1.6 Implementing Leadership Techniques to Drive IT Projects
- **2 Strategic Vision and Planning for IT Networks** — 6 classes
  - 2.1 Understanding Strategic Vision in IT Networks
  - 2.2 Analyzing the Role of Leadership in Network Planning
  - 2.3 Identifying Key Components of IT Network Strategies
  - 2.4 Developing Long-term Goals for Network Infrastructure
  - 2.5 Implementing Strategic Network Plans Effectively
  - 2.6 Evaluating the Success of IT Network Strategies
- **3 Influencing and Leading Diverse IT Teams** — 6 classes
  - 3.1 Understanding Team Dynamics in IT
  - 3.2 Cultivating Cultural Awareness and Sensitivity
  - 3.3 Building Trust Through Effective Communication
  - 3.4 Motivating and Empowering IT Team Members
  - 3.5 Navigating Conflict and Resolving Disputes
  - 3.6 Applying Leadership Styles to Diverse IT Teams
- **4 Decision Making and Problem Solving in Network Architecture** — 6 classes
  - 4.1 Understanding Decision-Making Frameworks in Network Architecture
  - 4.2 Identifying and Analyzing Problems in IT Infrastructure
  - 4.3 Applying Analytical Tools to Solve Network Architecture Problems
  - 4.4 Exploring Case Studies in Network Decision-Making
  - 4.5 Developing Strategies for Effective Network Problem Solving
  - 4.6 Evaluating Solutions and Making Informed IT Infrastructure Decisions
- **5 Innovation and Change Management in IT Infrastructure** — 6 classes
  - 5.1 Understanding Innovation in IT Infrastructure
  - 5.2 Identifying Drivers of Change in Enterprise Networks
  - 5.3 Analyzing the Impact of Technological Advancements
  - 5.4 Strategies for Leading Change in IT Infrastructure
  - 5.5 Implementing Change Management Frameworks
  - 5.6 Evaluating the Effectiveness of Innovation Initiatives

5 Operational Optimisation

5 chapters · 30 classes **65 marks**

- **1 Network Performance Metrics and Analysis** — 6 classes
  - 1.1 Understanding Key Network Performance Metrics
  - 1.2 Analyzing Network Latency and Bandwidth
  - 1.3 Evaluating Packet Loss and Jitter
  - 1.4 Interpreting Network Utilization Data
  - 1.5 Utilizing Tools for Network Performance Analysis
  - 1.6 Applying Network Metrics to Optimize Operations
- **2 Advanced Traffic Management and Optimization Techniques** — 6 classes
  - 2.1 Understanding Traffic Flow Principles
  - 2.2 Analyzing Network Bottlenecks
  - 2.3 Implementing Quality of Service (QoS) Protocols
  - 2.4 Applying Traffic Shaping Techniques
  - 2.5 Utilizing Advanced Load Balancing
  - 2.6 Evaluating Traffic Optimization Outcomes
- **3 Integrating Cloud Solutions for Network Enhancement** — 6 classes
  - 3.1 Understanding Cloud Solutions in Network Architecture
  - 3.2 Evaluating the Benefits of Cloud Integration in Networks
  - 3.3 Identifying Key Network Components for Cloud Integration
  - 3.4 Developing Cloud-Based Strategies for Network Enhancement
  - 3.5 Implementing Cloud Solutions to Enhance Network Performance
  - 3.6 Analyzing Outcomes of Network Enhancement through Cloud Integration
- **4 Security-Driven Network Optimization** — 6 classes
  - 4.1 Understanding Network Security Basics
  - 4.2 Identifying Security Risks in Network Architecture
  - 4.3 Analyzing Security-Driven Optimization Strategies
  - 4.4 Implementing Security Best Practices in Network Design
  - 4.5 Assessing the Impact of Security Solutions on Network Performance
  - 4.6 Applying Security-Driven Approaches to Optimize Networks
- **5 Continuous Improvement and Optimization Strategies** — 6 classes
  - 5.1 Introduction to Continuous Improvement in Networks
  - 5.2 Understanding Key Optimization Strategies
  - 5.3 Identifying Opportunities for Process Enhancement
  - 5.4 Implementing Lean Management Techniques
  - 5.5 Evaluating and Refining Workflow Processes
  - 5.6 Utilizing Data for Ongoing Network Improvements

6 Strategic Cloud Computing

5 chapters · 30 classes **85 marks**

- **1 Foundation of Cloud Computing and Strategic Impact** — 6 classes
  - 1.1 Understanding Cloud Computing Basics
  - 1.2 Exploring Cloud Service Models
  - 1.3 Analyzing Deployment Models in Cloud Computing
  - 1.4 Evaluating Business Benefits of Cloud Adoption
  - 1.5 Assessing Risks and Challenges in Cloud Strategy
  - 1.6 Strategizing Cloud Solutions for Competitive Advantage
- **2 Designing Scalable and Secure Cloud Architectures** — 6 classes
  - 2.1 Understanding Cloud Architecture Principles
  - 2.2 Identifying Key Components of Scalable Architectures
  - 2.3 Implementing Security Protocols in Cloud Environments
  - 2.4 Evaluating Scalability Strategies for Cloud Systems
  - 2.5 Designing Redundancy and Load Balancing Solutions
  - 2.6 Applying Compliance Standards in Cloud Architecture
- **3 Integrating Cloud Services with Enterprise Networks** — 6 classes
  - 3.1 Understanding Enterprise Networks in the Cloud Era
  - 3.2 Assessing Compatibility Between Cloud Services and Existing Infrastructure
  - 3.3 Planning Strategic Cloud Integration
  - 3.4 Implementing Cloud Security Protocols for Enterprise Networks
  - 3.5 Ensuring Seamless Data Flow Between Cloud and On-Premises Systems
  - 3.6 Evaluating Performance and Scaling of Integrated Cloud Services
- **4 Managing Cloud Costs and Optimizing Resources** — 6 classes
  - 4.1 Understanding Cloud Cost Structures
  - 4.2 Analyzing Cost Drivers in Cloud Environments
  - 4.3 Implementing Cost Management Tools
  - 4.4 Applying Resource Optimization Techniques
  - 4.5 Evaluating Cloud Resource Allocation Strategies
  - 4.6 Developing a Cost-Effective Cloud Strategy
- **5 Strategic Decision-Making in Cloud Deployment** — 6 classes
  - 5.1 Understanding Strategic Cloud Deployment Options
  - 5.2 Evaluating Business Needs for Cloud Solutions
  - 5.3 Assessing Risks in Cloud Adoption
  - 5.4 Analyzing Cost-Benefit Scenarios in Cloud Migration
  - 5.5 Aligning Cloud Strategies with Business Objectives
  - 5.6 Implementing Strategic Decisions in Cloud Architecture