Training Course on Infrastructure Management

Professional Development Training Course Outline

Category	Development	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's digitally driven world, **IT Infrastructure** forms the bedrock of every successful organization. It encompasses the essential hardware, software, networks, data centers, and cloud services that power business operations. Effective **Infrastructure Management (IM)** is no longer just about keeping the lights on; it's a strategic imperative focused on optimizing performance, ensuring **availability**, bolstering **cybersecurity**, and enabling business agility. This involves the proactive administration, monitoring, maintenance, and strategic planning of all core IT components to deliver seamless and reliable services. Mastering IM principles is crucial for navigating the complexities of modern IT environments and driving business value.

The landscape of IT infrastructure is constantly evolving, driven by trends like **Cloud Computing (AWS, Azure, GCP)**, **Hybrid Cloud** models, **Infrastructure as Code (IaC)**, **DevOps** integration, and increasingly sophisticated security threats. Training Course on Infrastructure Management provides a comprehensive understanding of both foundational concepts and cutting-edge practices in Infrastructure Management. Participants will gain practical skills in managing diverse infrastructure components, implementing **automation**, optimizing resource utilization (**FinOps**), enhancing security posture (**Zero Trust**), and ensuring business continuity (**BCDR**). This course empowers IT professionals to build, manage, and scale resilient, secure, and cost-effective infrastructure aligned with strategic business goals.

Programme Curriculum

Training Course on Infrastructure Management

Introduction

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5 days

Course Objectives

Upon successful completion of this course, participants will be able to:

1. Master core principles and best practices of **IT Infrastructure Management (ITIM)**.
2. Design and evaluate scalable **Hybrid Cloud** and **Multi-Cloud** architectures.
3. Implement and manage server **Virtualization** technologies (e.g., VMware, Hyper-V).
4. Administer and secure **Network Infrastructure**, including Software-Defined Networking (**SDN**).
5. Manage diverse server operating systems (Linux, Windows Server) effectively.
6. Optimize **Storage Solutions** (SAN, NAS, Cloud Storage) for performance and cost.
7. Deploy and manage resources within major **Cloud Platforms** (AWS, Azure, GCP).
8. Integrate **DevOps** practices using **Infrastructure as Code (IaC)** tools (e.g., Terraform, Ansible).
9. Implement robust **Infrastructure Security** measures based on **Zero Trust** principles.
10. Establish comprehensive **Monitoring**, **Observability**, and **AIOps** strategies.
11. Develop and test effective **Business Continuity and Disaster Recovery (BCDR)** plans.
12. Apply **FinOps** principles to manage and optimize infrastructure costs.
13. Analyze infrastructure performance bottlenecks and implement effective troubleshooting techniques.

Organizational Benefits

- **Improved System Uptime & Reliability:** Minimizing downtime through proactive management and robust architectures.
- **Enhanced Security Posture:** Reducing vulnerabilities and mitigating risks across the infrastructure stack.
- **Increased Operational Efficiency:** Streamlining processes through automation and standardized practices.
- **Optimized Resource Utilization & Cost Reduction:** Lowering Total Cost of Ownership (TCO) via efficient resource allocation and FinOps.
- **Greater Business Agility:** Enabling faster deployment of services and adaptation to market changes.

- **Improved Compliance & Governance:** Ensuring adherence to industry standards and regulations.
- **Enhanced Decision-Making:** Leveraging monitoring data and analytics for strategic planning.
- **Skilled Workforce:** Equipping IT teams with current, in-demand infrastructure management skills.

Target Participants

1. IT Managers and Team Leaders
2. System Administrators (Windows/Linux)
3. Network Engineers and Administrators
4. Cloud Engineers and Architects (AWS, Azure, GCP)
5. DevOps and Site Reliability Engineers (SRE)
6. IT Security Professionals and Analysts
7. Data Center Operations Staff
8. IT Professionals aspiring to specialize in infrastructure roles

Course Outline

Module 1: Foundations of Modern IT Infrastructure Management

- Core Concepts: Servers, Storage, Networks, Cloud, Virtualization
- The Infrastructure Lifecycle: Planning, Deployment, Operations, Decommissioning
- IT Service Management Frameworks (e.g., ITIL) in IM
- Key Trends: Cloud Adoption, Automation, Security Focus, AIOPs
- Roles and Responsibilities in Infrastructure Teams

Module 2: Network Infrastructure Management

- TCP/IP Fundamentals and Network Design Principles
- Switching, Routing, and VLAN Configuration
- Network Security: Firewalls, VPNs, Intrusion Detection/Prevention Systems (IDPS)
- Software-Defined Networking (SDN) Concepts and Benefits
- Wireless Network Management and Security

Module 3: Server Administration and Virtualization

- Server Hardware Components and Architectures
- Windows Server Administration Basics
- Linux Server Administration Basics (Command Line, Services)

- Virtualization Concepts: Hypervisors (Type 1 & 2), VMs
- Managing Virtualization Platforms (e.g., VMware vSphere, Microsoft Hyper-V)

Module 4: Storage Infrastructure Management

- Storage Concepts: DAS, NAS, SAN
- Storage Technologies: SSDs, HDDs, RAID Levels
- Cloud Storage Solutions (Object, Block, File)
- Data Backup, Recovery, and Archiving Strategies *
- Storage Provisioning, Performance Monitoring, and Optimization

Module 5: Cloud Infrastructure Services (IaaS, PaaS)

- Cloud Computing Models (IaaS, PaaS, SaaS) and Deployment Models (Public, Private, Hybrid)
- Overview of Major Cloud Providers: AWS, Azure, GCP Core Services
- Deploying and Managing Virtual Machines in the Cloud
- Cloud Networking and Security Fundamentals
- Cloud Cost Management and Optimization (FinOps Basics)

Module 6: Infrastructure Automation and DevOps Practices

- Introduction to Automation Benefits and Tools
- Scripting Essentials (e.g., Bash, PowerShell, Python) for Automation
- Infrastructure as Code (IaC) Principles (Terraform, CloudFormation, ARM Templates)
- Configuration Management Tools (e.g., Ansible, Puppet, Chef)
- Introduction to Containers (Docker) and Orchestration (Kubernetes)

Module 7: Infrastructure Security and Compliance

- Core Security Principles: Confidentiality, Integrity, Availability (CIA Triad)
- Implementing Network Security Controls
- Server Hardening and Endpoint Security Best Practices

- Identity and Access Management (IAM) Principles
- Understanding Compliance Frameworks (e.g., GDPR, ISO 27001, PCI DSS)

Module 8: Monitoring, Performance Tuning, and Business Continuity

- Infrastructure Monitoring Concepts: Metrics, Logs, Traces (Observability)
- Key Monitoring Tools and Platforms (e.g., Prometheus, Grafana, ELK Stack, Datadog)
- Performance Analysis and Troubleshooting Methodologies
- Introduction to AIOps (AI for IT Operations)
- Business Continuity Planning (BCP) and Disaster Recovery (DR) Strategies

Training Methodology

This training will employ a blended learning approach combining:

- **Interactive Lectures:** Presenting core concepts, theories, and best practices.
- **Hands-on Labs:** Providing practical experience with tools and technologies via virtual lab environments.
- **Real-world Case Studies:** Analyzing scenarios to apply learned concepts to practical challenges.
- **Group Discussions:** Facilitating peer learning and knowledge sharing.
- **Demonstrations:** Showcasing tool usage and configuration processes.
- **Quizzes and Assessments:** Reinforcing learning and measuring comprehension.
- **Resource Materials:** Providing access to slides, documentation, and further reading.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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