NCTA CERTIFIED CLOUD TECHNOLOGIES (NCT-110)

Who Should Attend

This course is an overview of cloud computing that will help students develop a deep understanding of the models and landscape of technologies used in the cloud and those employed by users of cloud services. It is designed for system administrators or prospective system administrators who have at least one year of experience working with Windows or Linux Servers, using administrative tools, configuring system properties, and configuring network settings.

Course Objectives

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

- Prepare for and pass the Certified Cloud Technologist (NCT-110) exam.
- Identify the benefits of cloud computing.
- Select end-user cloud technologies.
- Plan a cloud adoption.
- Address barriers to cloud implementation.
- Select and Implement free and paid SaaS solutions.
- Plan for cloud service migration.
- Select SaaS solutions for a small, medium, and enterprise businesses.
- Integrate SaaS solutions.
- Select PaaS and IaaS solutions.

Course Outline

DOMAIN 1 – CLOUD COMPUTING CONCEPTS AND BENEFITS

1.1 Translate Cloud Computing Benefits to Business Needs.

- Cloud Computing Principles
- Organizational Benefits and Uses
  - Big Data and Analytics
  - Mobile
  - Scalability
  - Cost Effectiveness
  - Layered Defense

1.2 Analyze Business Trends in Cloud Computing.

- Application Technologies
- Pay-Per-Use
- Grid Computing
- Policy-Based Scaling
- Expense Off-Loading

DOMAIN 2 – CLOUD SERVICE MODELS

2.1 Identify Service Models and Implementations

- Cloud Computing Service Models
  - NIST
  - SaaS
  - PaaS
  - IaaS
    - Networking
    - Virtualization
- Common Implementations
  - Public
  - Private
  - Hybrid

2.2 Identify Cloud Provider Benefits and Challenges

- Economy of Scale
- Optimization
- Resource Availability
- Responsibility for Security
- Down Time

DOMAIN 3 – CLOUD ADOPTION PLANNING

3.1 Plan Cloud Access and Management

- SLA's
- User Groups and Needs
- Data Access
- Infrastructure Management

3.2 Plan Cloud Provisioning

- Multitenancy
- Provisioning Requirements
- Utilization Models
  - Fixed
  - Variable

3.3 Select End-User Cloud Technologies

- Native Applications
  - Hardware Access
- Web Applications
  - Client-Side
  - Server-Side
  - Browser Requirements
  - Standards

3.4 Address Barriers to Cloud Implementation

- Cloud-Implementation Concerns and Challenges
  - Compliance
  - Legacy Applications and Systems
  - BYOD
  - Privacy and Security
  - Vendor Lock-In
  - Data Transfer and Availability

DOMAIN 4 – CLOUD SERVICE MIGRATION

4.1 Plan Domain Name Integration With Cloud Services

- Web Access and DNS
  - NSLookup
  - DNS Integration Considerations
  - DNS Integration Best Practices

4.2 Plan to Migrate Email to the Cloud

- Data Loss Mitigation
- Mail Flow
- Directories
- Migration Options

DOMAIN 5 – SaaS SOLUTIONS

5.1 Evaluate SaaS Solutions

- Free SaaS Solutions
- Paid SaaS Solutions

5.2 Select SaaS Solutions for Small Organizations

- Small Organization Needs
  - Accounting
  - Storage
  - Communication
  - Time and Project Management
  - Business Management
  - Multimedia
- Benefits to Smaller Organizations

5.3 Select SaaS Solutions for Medium and Large Organizations

- Large Organization Needs
  - CRM
  - Marketing
- Large Organization Requirements
  - Domain Mapping
  - User Roles
  - Provisioning
  - Branding

5.4 Implement SaaS Solutions

- SaaS Models
- SaaS Requirements
  - Native vs. Web Apps
    - Stateless Web Apps
  - Cloud Identity
- Provider Considerations
- Business Needs for SaaS Integration
- Implementation Planning
  - Stakeholder and Roles
  - Usage Scenarios
  - Implementation Phases
    - Testing
    - Pre-Deployment
    - Deployment

        - Monitoring and Support
    - Training

5.5 Evaluate Integration Options

- Integration Models
- Integration Points
    - Storage
    - Data
- Security Concerns
    - Authentication
    - Permissions and Access Controls
- Integration Best Practices

DOMAIN 6 – Evaluate PaaS and IaaS Solutions

6.1 Evaluate PaaS Solutions

- PaaS Types
- PaaS Benefits
- Requirements
    - Technological
    - Administrative

6.2 Implement PaaS Solutions

- Solutions for Small, Medium, and Large Organizations
- Implementation Best Practices

6.3 Compare IaaS to Traditional Infrastructure Solutions

- IaaS Benefits
- Usage Scenarios

6.4 Identify and select IaaS Providers

- Provider Service Types
    - Compute
    - Storage
    - Analytics
    - Database
    - Content Delivery
- Common Pitfalls