

NCTA Cloud Technologies

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Lesson 1: Identifying Business Benefits of Cloud Computing

Topic A: Cloud Computing Models for Business Needs

- Describe the core concepts of cloud computing

Terminology

- Identify the terminology used in cloud computing.

Core Concepts

- Identify core concepts used in cloud computing.

On Demand Self Service

- Describe on demand self service.

Resource Pooling

- Describe resource pooling.

Rapid Elasticity

- Identify what rapid elasticity is.

Measured Services

- Describe measured services.

Broad Network Access

- Identify broad network access.

Evolution of Business Models Similar to Cloud Computing

- Describe business models that have evolved in ways that are similar to cloud computing.

Guidelines for Applying Cloud Computing Models to Business Needs

Applying Cloud Computing Models to Business Needs

Topic B: Analyze Business Trends in Cloud Computing

- Analyze the business trends in cloud computing.

Technologies that Support Cloud Computing

- Describe technologies that support cloud computing.

Virtualization

- Identify virtualization technologies.

Grid Computing

- Describe the grid computing technologies.

Self Service

- Describe the self-service technologies.

Policy-Based Scaling

- Describe policy based scaling.

Pay Per Use

- Describe paying per use.

IT Expense Off-Loading

- Identify off-loading IT expenses.

Guidelines for Analyzing Trends that Make Cloud Computing Desirable

Analyzing Trends that Make Cloud Computing Desirable

Topic C: Evaluate Cloud Service Models

- Evaluate common cloud service models for business needs.

Key Services Models

- Identify what the key service modules are.

Software as a Service (SaaS)

- Describe software as a service.

Platform as a Service (PaaS)

- Describe platform as a service.

Infrastructure as a Service (IaaS)

- Describe infrastructure as a service.

Cloud Service Providers

- Identify well known cloud service providers.

Guidelines for Evaluating the Type of Cloud Service Model Required

Evaluating the Type of Cloud Service Model Required

Topic D: Evaluate Cloud Implementations

- Evaluate available cloud implementations to meet business needs

Overview of Cloud Implementations

- Describe the different cloud implementations.

Public Cloud

- Identify the public cloud implementation.

Public Cloud Examples

- Describe examples of the public cloud implementation.

Management in Public Cloud Scenarios

- Identify management options in public cloud implementations.

Researching Public Cloud Companies

Private Cloud

- Identify the private cloud implementation.

Private Cloud Examples

- Describe examples of the private cloud implementation.

Hybrid Cloud

- Identify the hybrid cloud implementation.

Hybrid Cloud Examples

- Describe examples of the hybrid cloud implementation.

Guidelines for Evaluating Cloud Implementation Options to Meet Business Requirements

Evaluating Cloud Implementation Options to Meet Business Requirements

Topic E: Identify Emerging Trends in Cloud

- Identify the emerging trends in cloud that affect business requirements.

Evolution in Cloud Computing Needs and Markets

- Describe the evolution in cloud computing needs and markets.

Big Data

- Identify the big data trend.

Big Data Analysis and Analytics

- Identify the big data analysis and analytics trends.

Graphics as a Service

- Describe the graphics as a service trend.

Mobile

- Identify the mobile trend.

Bring Your Own Device (BYOD)

- Describe the BYOD trend.

Guidelines for Evaluating Emerging Cloud Computing Trends

Evaluating Emerging Cloud Computing Trends

Lesson 2: Selecting End-User Cloud Technologies

Topic A: Select Native Applications

- Select native applications for use as end user cloud technology.

Applications or Apps

- Describe what applications are and how they fit in the cloud.

Application Options Available to End-Users

- Identify the application options available to end-users.

Native Apps

- Describe native apps and their characteristics.

Cloud Connection to Native Apps

- Identify the cloud connection to native apps.

Common Native App Examples

- Describe examples of native apps.

Guidelines for Selecting Native Applications for Cloud Solutions

Selecting Native Applications for Cloud Solutions

Topic B: Select Web Applications

- Select web applications for use as end-user cloud technology.

Web Apps

- Describe what web applications are and how they fit in the cloud.

Client Side and Server Side Processing

- Compare client side and server side processing.

Common Web App Components

- Describe the common web app components.

Cloud Connection to Web Apps

- Identify the cloud connection to native apps.

Web App Examples

- Describe examples of web apps.

Native Apps and Web Apps Comparison

- Compare native apps and web apps.

Guidelines for Selecting Web Applications for Cloud Solutions

Selecting Web Applications for Cloud Solutions

Lesson 3: Supporting the Business Case for Cloud Computing

Topic A: Business Benefits and Concerns

- Balance the business benefits and concerns when selecting cloud computing services.

Cloud Service Models

- Describe the different cloud service models.

Fast Deployment

- Describe the fast deployments of all models.

Outsourced Management

- Describe outsourced management.

Cost Reduction

- Identify how cloud computing can reduce costs.

Elasticity

- Identify the elasticity of cloud computing.

Business User Concerns

- Describe the potential concerns of business users.

Vendor Lock-in

- Describe the issues related to Vendor lock-in in cloud adoption scenarios

Guidelines for Selecting Cloud Services

Balancing Cloud Benefits and Concerns When Selecting Cloud Services

Topic B: Provider Benefits and Challenges

- Identify the provider benefits and challenges of cloud computing.

Economies of Scale

- Describe economies of scale and how it helps lower costs.

Fast Customer Acquisition and Short Sales Cycle

- Describe how the cloud computing sales cycle is different from traditional software.

Optimization Across Customers

- Identify how providers optimize service for customers.

Cloud Benefits for Big Data Scenarios

- Describe the cloud benefits for big data scenarios.

Challenges for Cloud Providers

- Identify the challenges that cloud providers face.

Evaluating how Cloud Providers Address Challenges

Topic C: Evaluate Cloud Deployment Options

- Evaluate cloud deployment options.

Utilization

- Identify the different cloud utilization options.

Load

- Describe load and peak load.

Provisioning Requirements for Applications

- Describe the provisioning requirements for applications.

Risks Associated with Over- or Under Provisioning

- Identify the risks with over and under provisioning.

Cloud and On-premises Cost Comparison

- Describe the difference in cost between cloud and on premises.

Economy of Scale

- Define the economy of scale.

Cloud Provider Advantages

- Identify the advantages of cloud providers.

Cost Comparison due to Economy of Scale in the Cloud

- Identify the static versus variable costs.

Cloud Cost Associativity

- Describe cloud cost associativity.

Advantages for Customers

- Describe the advantages for customers.

Guidelines for Evaluating Applications for Deployment to the Cloud

Evaluating Cloud Deployment Options

Lesson 4: Applying Cloud Computing Models

Topic A: Applying Cloud Models at the Provider

- Evaluate cloud services available in different cloud models.

Service Types

- Describe service types used.

Multitenancy

- Describe multitenancy.

Multitenancy in Public Cloud Scenarios

- Describe multitenancy in public cloud scenarios.

Multitenancy in Private Cloud Scenarios

- Describe multitenancy in private cloud scenarios.

Access Interfaces

- Identify the different access interfaces.

Guidelines for Evaluating Public and Private Cloud Options

Evaluating Public and Private Cloud Options

Topic B: Implement Cloud Models at the Customer

- Implement cloud service model at the customer.

Service Consumption

- Identify who might use each type of service.

Remote Access to Cloud Services

- Describe remote access to cloud services.

Application and Data Access

- Describe access to applications and data.

Application Updates

- Describe application updates.

Infrastructure Management

- Identify infrastructure management for cloud.

Cloud Model Application

- Describe cloud model application.

Cloud Model Application Scenarios

- Describe cloud model application scenarios.

Guidelines for Implementing Cloud Models

Implementing Cloud Models

Topic C: Address Challenges in Cloud Implementations

- Address challenges in cloud implementations.

Common Challenges in Cloud Implementations

- Describe the common challenges in cloud model implementations.

Security

- Identify security items for cloud model implementations.

Security Response: Security Property Control

- Describe the security property control.

Security Response: Provider Compliance

- Describe provider compliance.

Security Response: Cryptography

- Describe cryptography.

Availability

- Identify the challenges of availability.

Data Transfer

- Identify data transfer challenges.

Lock-in

- Define lock-in.

Lock-in Issues and Responses

- Describe the lock-in issues and responses.

Guidelines for Addressing Challenges for Cloud Implementations

Addressing Challenges for Cloud Implementations

Lesson 5: Integrating Cloud Services

Topic A: Plan Domain Name Integration with Cloud Services

- Plan to integrate domain names with cloud services for seamless access and connectivity.

Overview of Cloud Services Integration

- Describe the process of integrating cloud services.

Online Access Fundamentals

- Identify the key components to being available online.

Domain Name and Domain Name Service (DNS) Fundamentals

- Describe how domain name and DNS name resolution works.

DNS Records that Provide Access to Common Services

- Describe DNS records that provide access to services.

Other Elements Required for Online Access

- Identify other elements required for online access.

Guidelines for Planning Domain Integration with Cloud Services

Planning Domain Integration with Cloud Services

Topic B: Implement Cloud Service Access

- Implement cloud service access in your domain.

Name Resolution for Online Access to Cloud Services

- Describe the process of name resolution for cloud services.

Name Resolution for Online Access to Hybrid Services

- Describe the process of name resolution for hybrid services.

Internal Access to Cloud Services

- Describe internal access to cloud services.

External Access to Cloud Services

- Describe external access to cloud services.

Domain Name Considerations when Integrating Cloud Services

- Identify domain name considerations when integrating cloud services.

DNS Considerations when Integrating Cloud Services

- Identify DNS considerations when integrating cloud services.

Guidelines for Implementing Cloud Service Access in Your Domain

How to Implement Cloud Service Access in Your Domain

Implementing Cloud Service Access in Your Domain

Lesson 6: Selecting and Implementing Free Software as a Service (SaaS) Solutions

Topic A: Select SaaS for Personal Use

- Select SaaS for personal use.

Personal and Corporate SaaS Use

- List the different items that brands and individuals need

SaaS Models

- Identify the different SaaS models.

Mobile Device Effect on Cloud Services

- Describe how mobile devices have affected cloud services.

SaaS Productivity and Collaboration Software

- Identify the different types of software used for productivity and collaboration.

SaaS Requirements

- Identify the requirements for SaaS.

Benefits of Cloud Identity

- Describe the benefits of cloud identity.

Cloud Application State Preservation

- Define cloud application state preservation.

Cloud Application Processing

- Describe cloud application processing.

Guidelines for Selecting Free SaaS Solutions

Selecting Free SaaS Solutions

Topic B: Implement a Free SaaS Solution

- Implement a free SaaS solution.

Considerations for Selecting a SaaS Provider

- Consider how to select a SaaS provider.

Google Docs

- Define google docs as an example of SaaS.

Google Docs Limitations

- Describe the limitations of google docs.

Guidelines for Selecting SaaS Products and Vendors

Selecting Productivity Software

Identification of Implementation Requirements

- Identify the implementation requirements of google docs.

Cloud ID Requirement: Google Account

- Describe the google account cloud id requirement.

Guidelines for Implementing Free SaaS Solutions

Implementing and Collaborating with Google Docs

Lesson 7: Selecting and Implementing a Paid SaaS Solution

Topic A: Identify Corporate SaaS Requirements

- Identify corporate requirements for SaaS solutions.

Corporate SaaS Needs

- Identify the corporate needs for SaaS.

SaaS User Types in a Corporate Deployment

- Identify the SaaS user types in corporate deployment.

Domain Mapping

- Describe domain mapping.

Branding

- Define branding.

Authentication Integration

- Describe integrating authentication.

Provisioning

- Define provisioning.

Policies and Control

- Identify the policies and control.

Mobile and Client Sync

- Describe syncing for mobile devices and clients.

Guidelines for Identifying Corporate SaaS Requirements

Identifying Requirements for Corporate SaaS Solutions

Topic B: Select a Paid SaaS Solution

- Select a paid SaaS solution.

Overview of Paid SaaS Solutions

- Describe when and why you would select a paid SaaS solution.

Office 365

- Describe the Office 365 service.

Application Types

- Identify the different application types.

Mobile Access

- Describe mobile access for paid SaaS solutions.

End User Applications

- Describe different end user applications.

Office Professional Plus

- Describe Office Professional plus.

Back-End Applications

- Identify different back end applications.

Exchange Online

- Describe Exchange Online.

SharePoint Online

- Describe SharePoint Online.

Lync Online

- Describe Lync Online.

Guidelines for Selecting Paid SaaS Solutions

Selecting a Paid SaaS Solution

Topic C: Implement a Paid SaaS Solution

- Implement a paid SaaS solution.

Plan Implementation for Paid SaaS Solutions

- Describe the process of implementing a paid SaaS solution.

Key Preparation Tasks

- Identify the tasks to prepare for implementing a SaaS solution.

Implementation Roles

- Describe the different implementation roles.

Implementation Phases

- Identify the different implementation phases.

Guidelines for Implementing Paid SaaS Solutions

Planning, Implementing, and Testing a Paid SaaS Solution

Lesson 8: Selecting SaaS Solutions for Small Businesses

Topic A: Select SaaS Accounting Solutions

- Select SaaS accounting solutions.

Accounting Software

- Define accounting software.

Traditional and Cloud Accounting Solutions

- Compare traditional versus cloud accounting solutions.

Traditional Back-End Services Coupled with Accounting Software

- Describe traditional back-end services coupled with accounting software.

Benefits of Accounting SaaS

- Identify the benefits of accounting SaaS.

Key Evaluation Criteria for Accounting Solutions

- Identify the key evaluation criteria for accounting solutions.

Accounting SaaS Providers

- Identify different account SaaS providers.

FreshBooks SaaS Accounting Solution

- Describe the FreshBooks SaaS accounting solution.

Guidelines for Selecting SaaS Accounting Solutions

Registering for FreshBooks

Topic B: Select SaaS Storage Solutions

- Select SaaS storage solutions.

Traditional Storage Solutions for Businesses

- Describe traditional storage solutions for businesses.

Storage Issues

- Identify different storage issues.

Online Storage Solutions

- Identify different online storage solutions.

Benefits for Online Storage Solutions

- Identify the benefits of online storage solutions.

Version Control for Files and Projects

- Describe version control for files and projects.

Traditional Version Control Solutions

- Identify traditional version control solutions.

Benefits of Version Control SaaS

- Describe the benefits of version control SaaS.

GitHub SaaS Solution

- Define the GitHub SaaS solution.

Key Criteria for Selecting Storage Solutions

- Identify the key evaluation criteria for storage solutions.

Guidelines for Selecting SaaS Storage Solutions

Selecting SaaS Storage Solutions

Topic C: Select SaaS Project Management Solutions

- Select SaaS project management solutions.

Traditional Project Management Software

- Describe different traditional project management software.

Benefits for SaaS Project Management Solutions

- Identify the benefits of SaaS project management solutions.

Project Management SaaS Vendors

- Identify different project management SaaS vendors.

Basecamp

- Define Basecamp.

Key Criteria for Selecting Project Management SaaS Solutions

- Identify the key criteria for evaluating project management solutions.

Guidelines for Selecting SaaS Project Management Solutions

Selecting SaaS Project Management Solutions

Topic D: Select Other Small Business SaaS Solutions

- Select other small business SaaS solutions.

Productivity Solutions

- Identify different productivity SaaS solutions.

Document Signing and Verification Solutions

- Identify different document signing and verification SaaS solutions.

Small Business Management Solutions

- Identify different small business management SaaS solutions.

Encoding.com

- Define encoding.com.

Guidelines for Selecting SaaS Solutions for Small Business

Selecting Video Encoding Software

Lesson 9: Selecting SaaS Solutions for Medium-sized to Enterprise Businesses

Topic A: Select SaaS CRM Solutions

- Select CRM SaaS solutions.

CRM

- Define CRM.

CRM Solutions

- Identify the different CRM solutions.

Cloud Benefits for CRM Solutions

- Describe the cloud benefits for CRM solutions.

Cloud CRM Providers

- Identify the cloud CRM providers.

Salesforce Suite of SaaS Solutions

- Describe the Salesforce suite of SaaS solutions.

Key Criteria for Selecting CRM SaaS Solutions

- Identify the key criteria for selecting CRM SaaS solutions for medium and enterprise businesses.

Guidelines for Selecting SaaS CRM Solutions

Selecting a SaaS CRM Solution

Topic B: Select SaaS Marketing Solutions

- Select SaaS marketing solutions.

Overview of Marketing Solutions

- Describe different marketing SaaS solutions.

Social Media Management Tools

- Identify social media management tools.

Social Media Management SaaS Providers

- Identify social media management SaaS providers.

Analytics Tools

- Describe SaaS analytics tools.

SaaS Analytics Tools Providers

- Identify SaaS analytics tools providers.

Marketing Automation SaaS Software

- Describe marketing automation SaaS software.

Marketing Automation SaaS Providers

- Identify marketing automation SaaS providers.

Key Criteria for Selecting SaaS Marketing Solutions

- Identify the key criteria for selecting SaaS marketing solutions for medium and enterprise businesses.

Guidelines for Selecting SaaS Marketing Solutions

Selecting SaaS Marketing Solutions

Topic C: Select SaaS Enterprise Resource Planning Solutions

- Select SaaS Enterprise resource planning solutions.

Enterprise Resource Planning (ERP) Software

- Define enterprise resource planning software.

Traditional ERP Solutions

- Identify traditional ERP solutions.

Cloud Benefits for ERP Solutions

- Describe the cloud benefits of ERP solutions.

Cloud ERP SaaS Vendors

- Identify the cloud ERP SaaS vendors.

NetSuite ERP

- Define NetSuite ERP.

Key Criteria for Selecting SaaS ERP Solutions

- Identify the key criteria for selecting SaaS ERP solutions for medium and enterprise businesses.

Guidelines for Selecting SaaS ERP Solutions

Selecting SaaS ERP Solutions

Lesson 10: Integrating SaaS Solutions

Topic A: Determine Business Needs for SaaS Integration

- Determine the business needs for SaaS integration.

Traditional Integration Model

- Describe the traditional integration model.

Integration in SaaS Model

- Describe integration in the SaaS model.

Software Integration

- Define software integration.

Data Integration

- Define data integration.

Authentication and User Update Integration

- Describe authentication and user update integration.

Timeliness

- Define timeliness.

Automated and Manual Integration

- Identify the difference between automated and manual integration.

Guidelines for Determining Integration Needs for SaaS Software

Determining Integration Needs for SaaS Software

Topic B: Integrate SaaS Solutions

- Integrate SaaS software solutions.

Common SaaS Integration Points

- Identify the common SaaS integration points.

Storage

- Identify different storage options.

Data Access

- Identify different data access options.

Additional Needs

- Describe additional needs for SaaS integration.

Additional Potential Infrastructure Requirements

- List additional infrastructure requirements.

Guidelines for Integrating SaaS Solutions

Integrating SaaS Solutions

Lesson 11: Selecting Platform as a Service (PaaS) Solutions

Topic A: Classify PaaS Solution Benefits

- Classify the benefits of SaaS solutions for businesses in different application deployment scenarios.

PaaS

- Describe PaaS.

PaaS and SaaS

- Compare PaaS to SaaS.

Types of PaaS

- Identify different types of PaaS.

Benefits of PaaS for Application Deployment

- Describe the benefits of PaaS for application deployment.

PaaS Usage Scenarios

- List different PaaS usage scenarios.

Guidelines for Classifying the Benefits of PaaS Solutions

Classifying the Benefits of a PaaS Solutions

Topic B: Select PaaS Solutions for Small Business

- Select PaaS solutions for small business.

Common PaaS Solutions for Small Businesses

- Identify common PaaS solution for small businesses.

Developer Technology Requirements for PaaS Solutions

- Identify the developer technology requirements for PaaS Solutions.

Administration Requirements for Small Business PaaS Solutions

- Identify the administration requirements for small business PaaS Solutions.

Support Requirements for Small Business PaaS Solutions

- Identify the support requirements for small business PaaS Solutions.

Common PaaS Solution Providers for Small Business

- Describe the common PaaS providers for small business.

WordPress as a PaaS Solution

- Define WordPress as a PaaS solution.

Key Criteria for Evaluating PaaS Solutions for Small Business

- Identify the key criteria for evaluating PaaS solutions for small businesses.

Guidelines for Selecting PaaS Solutions for Small Business

Selecting PaaS Solutions for Small Business

Setting up WordPress

Topic C: Select PaaS Solutions for Medium and Enterprise Businesses

- Selecting a PaaS solution for medium and enterprise businesses.

Common PaaS Solutions for Medium and Enterprise Businesses

- Identify common PaaS solutions for medium and enterprise businesses.

Administration Requirements for Medium and Enterprise PaaS Solutions

- Identify the administration requirements for medium and enterprise PaaS solutions.

Support Requirements for Medium and Enterprise PaaS Solutions

- Identify the support requirements for medium and enterprise PaaS solutions.

Common PaaS Solution Providers for Medium and Enterprise Businesses

- Identify the PaaS solution providers for medium and enterprise businesses.

Drupal as a Technology

- Define drupal.

Drupal Gardens as a PaaS Solution

- Describe drupal gardens as a PaaS solution.

Key Criteria for Evaluating PaaS Solutions for Medium and Enterprise Businesses

- Identify the key criteria for evaluating PaaS solutions for medium and enterprise businesses.

Guidelines for Selecting PaaS Solutions for Medium and Enterprise Businesses

Evaluating PaaS Solutions for Medium and Enterprise Businesses

Setting up Drupal Gardens

Lesson 12: Selecting Infrastructure as a Service (IaaS) Solutions

Topic A: Compare IaaS to Traditional Infrastructure Solutions

- Classify IaaS benefits for business infrastructure needs.

IaaS

- Define IaaS.

IaaS, PaaS, and SaaS Comparison

- Compare IaaS to PaaS and SaaS.

Benefits of IaaS for Businesses

- Describe the benefits of IaaS for businesses.

IaaS Usage Scenarios

- Identify IaaS usage scenarios.

IaaS as Providing Ultimate Flexibility for Business

- Describe how IaaS provides flexibility for businesses.

Guidelines for Comparing IaaS to Traditional Infrastructure Solutions

Comparing IaaS to Traditional Infrastructure Solutions

Topic B: Compare IaaS Providers

- Evaluate features and components of major IaaS providers.

Computer and Network Infrastructure Components

- Describe common computer and network infrastructure components available from IaaS providers.

Database Support

- Describe common database components available from IaaS providers.

Storage and Content Delivery

- Describe common storage and content delivery components available from IaaS providers.

Analytics and Measurement Options

- Describe analytics and measurement options.

Amazon Web Services

- Describe common IaaS service features offered in AWS.

Rackspace Cloud

- Describe common IaaS service features offered in Rackspace Cloud.

Microsoft Azure

- Describe common IaaS service features offered in Microsoft Azure.

Other Cloud Providers

- Identify other well-known cloud providers.

Building Blocks Map

- Describe the building blocks that make up an IaaS solution.

Example Deployment: OpenStack Red Hat

- Describe what a deployment using OpenStack Red Hat looks like.

Example Architecture: AWS

- Describe an example architecture of Amazon Web Services

Guidelines for Comparing IaaS Providers

Comparing IaaS Providers to Meet Business Needs

Topic C: Select an IaaS Solution

- Select an IaaS solution.

Business Needs that Warrant IaaS

- Identify business needs that would warrant using IaaS to address them.

Provider Administration in IaaS Scenarios

- Describe provider administration in IaaS scenarios.

Administrative Requirements for IaaS Solutions

- Describe the administrative requirements for IaaS solutions.

IaaS Providers

- Identify different IaaS providers.

RightScale as an IaaS Solution

- Describe using RightScale as an IaaS solution.

Key Criteria for Evaluating IaaS Solutions

- Identify the key criteria for evaluating IaaS solutions.

Guidelines for Selecting IaaS Solutions

Selecting IaaS Solutions