

COURSE OUTLINE



CCNA
CISCO CERTIFIED NETWORK ASSOCIATE

Course Description

This course will give you a better understanding of the fundamentals of networking. The course will give you're a comprehensive guide and hand on-learning on how to install, configure and operate LAN, WAN, and other services to be a CCNA certified professional.

Learning Outcomes

- Understand basic networking and other components, and how to work with them
- Configure, verify, and troubleshoot the different components in networking
- Identify the proper requirements needed for proper connection of switches

Teaching Methods

This course will use lecture discussion with visual presentation and demonstration, hands-on exercises and practices.

Course Outline

Introduction to Networks

- Functions of Different Network Devices
- Understanding OSI and TCP/IP
- Identifying Network Applications
- Understanding network diagrams
- Understanding data flow
- Differentiating between LAN and WAN

Configuring, verifying and troubleshooting

- Understanding switches & using them
- Identifying switching technologies
- Configuring switch
- Understanding Ethernet networks
- Managing network segmentation & basic traffic
- Verifying using basic utilities & commands
- Identifying and resolving switch issues
- Implementing basic Switch Security

IP addressing and IP Services

- Using private & public IP addresses
- Using DHCP and DNS
- Configure, verify & troubleshoot DHCP & DNS operation
- Addressing schemes
- IPv6 vs IPv4
- Identifying & resolving IP addressing problems

Introduction to Routing

- Basic Routing Concepts
- Connecting Routers
- Operating Cisco routers
- Comparing different routing methods
- Verify network connectivity
- Identifying and resolving Routing issues
- Implementing Security

Understanding WLA

- Understanding wireless media and wireless networks
- Configuring wireless networks
- Comparing the kinds of wireless security
- Identifying and resolving wireless network issues

Understanding NAT and ACLs

- Types of ACLs
- Configuring and applying ACL
- Troubleshooting ACL
- Basic Operation of NAT
- Troubleshooting NAT

Understanding WAN Technologies

- Identify different WAN Technologies
- Understanding VPN
- Configure and verify a PPP connection between Cisco routers
- Troubleshooting WAN issues

Implementing Security

- Identify security threats
- Mitigating and securing networks
- Using security appliances and applications

COURSE OUTLINE

Network Management



Course Description

This course provides hands-on practice on how to execute security, monitoring, control, allocation, deployment, coordination and planning in the networks. The course will further develop your knowledge on the broad subject of handling computer networks.

Learning Outcomes

- Understand the importance of a good network design
- Understand the network management protocols and standards
- Secure the network design

Teaching Methods

This course will use lecture-discussion, actual demonstration and hands-on exercises and practices

Course Outline

Network design

- Creating a good network design
- Hierarchical design building blocks
- Network addressing strategies
- Virtual LANs (VLANs)
- Switching and security considerations

Network Management

- Basic Concepts, Terminologies, and Principles
- Basic configuration management
- Fault management
- Fault mitigation
- Performance management
- Disaster response planning
- Network Monitoring
- Repairs and upgrades

Importance of Internet

- Troubleshooting problems
- Bandwidth management

Solving network problems

- Problems encountered in network management
- Troubleshooting

Technical and Security measures

- Network monitoring
- Using Firewalls
- Using Antivirus
- Proxy caches

COURSE OUTLINE

NETWORK SECURITY



Course Description

Keeping your company's data secure is vital in maintaining the stability of your business. Protected Information will guarantee that safety of confidential files and protect your business reputation. This is why learning how to secure these data is pertinent.

With this course, you'll learn how to monitor, maintain, and defend your business information structure against threats and vulnerabilities. You'll be introduced to the different methods and strategies in networking security and how to apply them to create a strong line of defense.

Learning Outcomes

- Understand the potential threats and vulnerabilities of computer networks
- Build a strong line defense
- Learn the different ways monitoring and maintaining security

Teaching Methods

This course will use lecture, discussion, actual demonstration, and hands-on exercises and practices to test students learning

Course Outline

Introduction

- Basic Principles and Concepts
- Defense using software and hardware

Network Security Strategies

- Threats and Vulnerabilities
- Secure Network Design
- Encryption
- Monitoring and Maintenance
- Detecting and responding to attacks

Overview on Firewall Security

- Overview on Firewall
- Identify Firewall Security Strategies
- Configuring Firewall Network Settings
- Monitoring and detecting

Router Security

- Router Security Strategies
- Router Base Security Configuration

LAN Switch Security

- Switch Security Strategies
- Switch Port Security
- Switch Port Mirroring

Network Monitoring and Intrusion Detection

- Network Mapping
- Log Monitoring
- Packet Sniffing
- Intrusion Detection and Prevention

COURSE OUTLINE



Course Description

Through this course, you'll get a more advance understanding on the different concepts and tools in the latest technology released by Oracle, Oracle 12c. Students will learn different techniques and solutions in order to be equipped with the necessary skills as becoming a top performing professional database administrator.

Learning Outcomes

- Identify and understand the different back-up methods and recovery solutions
- Create an effective plan in backing up files and database
- Understand the multitenant architecture to better create containers database and pluggable databases
- Apply the strategies and tools in monitoring and managing multitenant CDB and PDB

Teaching Methods

This course will use lecture-discussion with visual presentation & demonstration, hands-on exercises & practices.

Course Outline

In-depth Backup and Recovery

Introduction to Recovery and Back-up

- Basic concepts and principles
- Identifying recovery and back-up solutions
- Identifying failures
- Knowing Recovery Requirements
- Working with Data Guard

Recoverability Configuration

- Using the Recovery Manager
- Using Fast Recovery Area
- Configuring Persistent Settings

Overview on Back-up Solutions

- Identifying Back-up Solutions
- Knowing requirements in performing back-ups
- Improving Back-up solutions

Identifying Database Failures

- Interpreting RMAN messages and errors
- Working with the Automatic Diagnostic Repository
- Using the Data Recovery Advisor Tool

Overview on Restoring and Recovery

- Restoring and Recovering solutions
- Techniques in Performing Recovery
- Best Practices involved

Managing Multitenant Architecture

Overview on Container & Pluggable Database Architecture

- Basic Concepts and Terminologies
- Understanding the Multitenant Architecture

Overview on CDB and PDB

- Creating CDB and PDB
- Configuring CDB and PDB
- Managing CDB and PDB
- Managing Performance

Implementing Security in CDB and PDB

- Using Roles
- Using Privileges
- Creating Users

Back-up and Recovery

- Implementing back-up solutions
- Duplicating PDBs

COURSE OUTLINE

Course Description

PL/SQL combines SQL with other procedural features of programming languages. The course will teach how to write and use this powerful programming language in getting the most of your SQL Database.

Learning Outcomes

- Understand the architecture and the different features of PL/SQL
- Design and write PL/SQL both simple and advance code blocks
- Execute the design program with efficiency
- Manipulate codes using the different tools and expressions

Teaching Methods

This course will use lecture-discussion with visual presentation & demonstration, hands-on exercises & practices.

Course Outline

Introduction to PL/SQL

- Basic Concepts and Terminologies
- Difference between SQL and PL/SQL
- Understanding the PL/SQL Architecture

Identifying PL/SQL Structure

- Understanding PL/SQL Blocks
- Understanding PL/SQL Variables and Non-PL/SQL Variables
- Declaring PL/SQL variables and constants

Writing Executable Statements

- List Lexical Units in a PL/SQL Block
- Using SQL Functions in PL/SQL
- Using Data Type Conversion
- Using Nested Blocks as Statements
- Using Operators in PL/SQL
- Using Sequences in PL/SQL Expressions

Using SQL Statements within a PL/SQL Block

- Identifying SQL Statements in PL/SQL
- Retrieving data with the SELECT Command
- How to Avoid Errors
- Manipulating data
- Saving and Discarding Transactions

Writing Control Structures

- Controlling PL/SQL Flow of Execution
- Using Conditional processing
- Avoiding Common Mistakes
- Using Logical Operators
- Using Looping Statements

Working with Composite Data Types

- Learn the Composite Data Types of PL/SQL Records and Tables
- Use PL/SQL Records to Hold Multiple Values of Different Type
- Inserting & Updating with PL/SQL Records
- Use INDEX BY Tables to Hold Multiple Values of the Same Data Type

Understanding SQL Cursor concept

- Definition of Cursors
- Using Explicit Cursors
- Cursors and Records
- The %NOTFOUND and %ROWCOUNT Attributes

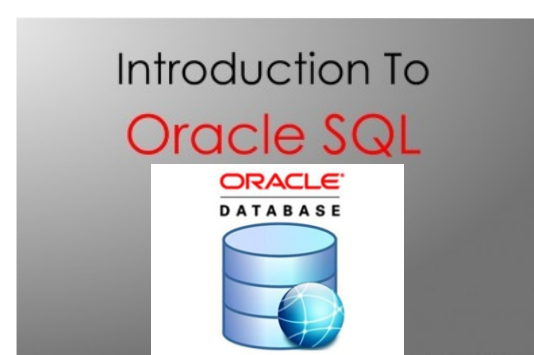
Handling Exceptions in PL/SQL

- Defining Exception
- Handling Exceptions

Understanding Stored Procedures & Functions

- Overview of Stored Procedures & Functions
- Differentiate between anonymous blocks and subprograms
- Creating & executing Simple Procedures and Functions

COURSE OUTLINE



Course Description

The course aims to teach students the fundamental knowledge in Oracle SQL. It will equip you with the necessary skill and knowledge in creating, managing, and manipulating data and databases-

Prerequisites

Basic Microsoft Access

Learning Outcomes

- Identify and understand the concepts and tools involved in SQL in order to create and manage tables and data
- Manipulate objects containing data
- Use various commands or functions in retrieving, sorting, and restricting data

Teaching Methods

This course will use lecture -discussion with visual presentation & demonstration, hands-on exercises & practices.

Course Outline

Introduction to SQL

- Basic Concepts and Terminologies
- Understanding the SQL Programming Language
- Relational Databases and Data Models

Setting up the Interface and using the tools

- SQL Developer
- SQL*Plus
- Jdeveloper

Retrieving Data

- Using the SELECT Statement
- Using Column Heading Defaults
- Using Arithmetic Operators
- Using the DESCRIBE command

Restricting and Sorting Data

- Using commands
- Limiting and sorting through rows

Using Single-Row Functions to Customize Output

- Identify the different functions in SQL
- Manipulating strings and numbers

Using Group functions

- Identify the different group functions
- Creating and restricting group data
- Understanding the different types of JOINS
- Displaying data using JOINS

Subqueries

- Understanding subqueries
- Types of subqueries
- Manipulating data
- Retrieving Data
- Using set operators

Introduction to Data Definition Language

- Creating and managing tables
- The Data Structure

Overview on Schema Objects

- Understanding Schema Objects
- Creating Views
- Managing schema objects

Controlling User Access

- Understanding Privileges
- Creating Roles

Managing and manipulating data

- Overview of the Explicit Default Feature
- Managing data in different time zones