



COURSE OUTLINE

Section 1:

Course Title: Active Directory Infrastructure

Course Code: CNET-2110

Course Description: The installation, configuration, and management Microsoft's Windows Active Directory. Students explore how Active Directory is used in enterprise networks. Students implement Active Directory services to manage network services while maintaining corporate security requirements. The learning outcomes for this course map to portions of the Microsoft Certified IT Professional (MCITP) certification.

Grade Scheme: ☐ Pass/Fail ☒ Percentage Minimum Pass Mark: 60%

Course Value: Outcome hours OR 3 Credit(s) 60 (15 class + 45 lab) Hours

Pre-requisites: CNET-1110 Windows Server Administration

Co-requisites: NONE

Section 2:

Learning Outcomes and Competencies

1. Develop an efficient Active Directory structure for an enterprise network.

- 1.1 Plan an Active Directory logic structure including forests, trees, organizational units (OU), and domain structures.
- 1.2 Plan an Active Directory site topology.
- 1.3 Plan a strategy for placing global catalog servers.
- 1.4 Plan for flexible Operations Master Role placement.
- 1.5 Implement an Active Directory structure.
- 1.6 Implement an Active Directory site topology.

2. Maintain the Active Directory infrastructure for maximum availability.

- 2.1 Configure and manage trust relationships.
- 2.2 Configure and maintain Active Directory replication.
- 2.3 Manage Active Directory sites.
- 2.4 Configure Active Directory roles and services.
- 2.5 Promote and demote servers and domain controllers.
- 2.6 Troubleshoot Active Directory problems.
- 2.7 Perform Active Directory backups.
- 2.8 Perform authoritative and non-authoritative restores of Active Directory.
- 2.9 Monitor Active Directory performance and perform routine maintenance.

3. Implement user, computer, and group strategies to reduce administration overhead.

- 3.1 Plan a security group strategy.
- 3.2 Plan a user authentication strategy.
- 3.3 Create and configure Active Directory user, group, and computer accounts.
- 3.4 Delegate control of OUs.
- 3.5 Configure account policies to maximize system security.
- 3.6 Explain the difference between Active Directory object permissions and file/folder permissions.
- 3.7 Configure Active Directory object permissions to minimize administrative overhead while maximizing security.

4. Manage file and print services to provide secure services to users.

- 4.1 Compare and contrast share and NTFS permissions.
- 4.2 Configure file/folder permissions to meet user and security requirements.
- 4.3 Configure disk quotas.
- 4.4 Explain the benefits of using shadow copies.
- 4.5 Configure shadow copies.
- 4.6 Implement a Distributed File System.
- 4.7 Install and manage printing services.

5. Implement Group Policies to enforce corporate policies.

- 5.1 Plan a Group Policy strategy.
- 5.2 List the order in which Group Policies are applied.
- 5.3 Configure the user environment by using Group Policies.

- 5.4 Deploy application software using Group Policies.
- 5.5 Maintain installed software by using Group Policies.
- 5.6 Configure audit policies by using Group Policies.
- 5.7 Troubleshoot issues related to Group Policy application.

6. Configure the Domain Name System (DNS) for Active Directory.

- 6.1 Install DNS.
- 6.2 Configure DNS zones and resource records.
- 6.3 Configure DNS server settings.
- 6.4 Configure zone transfers and replication.

7. Implement Active Directory Certificate Services.

- 7.1 Explain the purpose of digital certificates, certification authorities (CA) and Public Key Infrastructure (PKI).
- 7.2 Install Active Directory Certificate Services.
- 7.3 Configure CA server settings.
- 7.4 Create and manage certificate templates.
- 7.5 Manage enrollments.
- 7.6 Manage certificate revocations.

Section 3:

Assessment Categories:	Theory Tests and Exams	35%
	Practical Tests and Exams	30%
	Labs and Assignments	25%
	Professionalism	10%

Research Component? ☐ Yes ☒ No

Section 4:

(For administrative use only)

Is this course new? ☐ Yes ☒ No

Is this course replacing an existing course(s)? ☐ Yes ☒ No

If this course is replacing another, please record the name and code of the old course:

Course equivalents: NONE

Note: See Quality Procedure [A01](#) for more details.

Catalog Year of Original Course Implementation: 2011

Catalog Year of Current Version Implementation: 2015

Revision level: 2 Version: 3 Date: June/2016 Authorized by: MLGJ

Accreditation and or Supporting Documents: National Technology Benchmarks: Canadian Council of Technicians & Technologists; Discipline: Information Technology; Level: Technologist
Additional Information: None
Subject matter expert(s): Lino Forner and Chris Arsenault

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Date Approved: **2016-06-30**

Approved by: (Curriculum Consultant)

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Date Approved: **2016-06-30**