



Ministry of cooperatives
Labour and Social Welfare



Iran Technical and Vocational
Training Organization

Deputy of training
Plan and curriculums office

Competency Training standard

Title

NetApp Certified Storage Associate(NCSA)

Occupational group

INFORMATION TECHNOLOGY (IT)

International code

2523-53-158-1

Date of Standard Compilation: 2016/03/05

Control of board on content compilation and accreditation: Plan and curriculums office
National code: 2523-53-158-1

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Revision Process:

- Scientific content
- According to market
- Equipment
- Tools

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Definitions:

Job standard:

The characteristics ' required competencies and abilities for Efficient Performance in work environment is called "the Job standard", and sometimes “The Occupational standard”

Training standard:

The Training Map for achieving the Job’s subset Competencies.

Job title:

Is a set of Tasks and Abilities which is expected from an employed person in the defined level

Job description:

A statement covering the most important elements of a job, namely the position or title of the job, the duties, job’s relation with other jobs in a occupational field, the responsibilities, workplace conditions and required performance standards.

Course duration:

The minimum of time which is required to achieve the training objects.

Admission requirements:

The minimum of competencies and abilities which are obligatory for a potential admission.

Evaluation:

The process of collecting evidence and judgment about whether a competency is achieved or not.

Include: written examination, practical examination

Required Qualifications for Trainers:

The minimum of Trainer’s technical and vocational abilities which the trainer is required to have.

Competency:

The ability of efficient performing a duty in a variety of workplaces conditions

Knowledge:

The minimum set of facts and mental capacities which is necessary for achieving a competency. This can include science, (Mathematics, physics, chemistry or biology), technology or technical.

Skill:

The minimum coordination between mind and body for achieving an ability or competency. It normally applied to practical skills.

Attitude:

A set of emotional behaviors required for achieving a competency and can have non-technical skills and occupational ethics.

Safety:

The cases which doing or not doing something can cause harm or accident

Environmental Consideration:

A set of consideration about the act which should be done to minimize the environmental damage or pollution.

Competency Title:**NetApp Certified Storage Associate (NCSA)****Competency Description:**

NetApp Certified Storage Associates demonstrate a basic understanding of NetApp storage systems and Data ONTAP administration and management solutions. Students can understand the features and functions of 7-Mode and clustered Data ONTAP, and are able to perform basic administration of NetApp storage controllers running the Data ONTAP® operating system in NFS and Windows® (CIFS) multi-protocol environments.

Admission Requirements:

minimum degree of education: Post first year of high school

minimum physical and mental ability:-

Prerequisite skills: Comptia Network+ Certification & Microsoft MCSA

Course duration:

Course duration: 60 hours

-Theoretical :20 Hours

-Practical :40 Hours

-Apprenticeship:... Hours

-Project:... Hours

Evaluation :(%)

Exam Time for Native English speakers	90 minutes
Exam Time for Non-native English speakers	120 minutes
Number of questions	55-65
Exam Number	NS0-145
Associate Certification	NetApp Certified Storage Associate

IRANTVTO Evaluation :(%)

Written Examination:25%

Practical Examination:65%

Ethics:10%

Required Qualifications for Trainers:

Computer or IT or ART related Bachelor with 2 years' experience

Competency Training Standard

Competencies

	Title
1	Storage Fundamentals
2	NetApp Products
3	Data ONTAP 7-Mode Fundamentals
4	Basic NetApp Configuration and Administration tasks
5	Basics of SAN
6	Basics of Virtualization
7	CIFS administration tasks
8	NFS administration tasks
9	An introduction to clustered Data ONTAP for Data ONTAP 7-Mode Administrators

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Training standard

Contents analysis form

Title: Storage Fundamentals	time			
	theoretical	practical	total	
	Determined by the instructor			
Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - Explain the issues that organizations face because of data growth - Describe the factors that an organization needs to consider when investing in a storage solution - Describe the components, protocols, and technology that underlie direct-attached storage - Describe the components, protocols, and technology that underlie networked storage architecture - List the benefits of storage virtualization and flash storage - List the characteristics of private cloud, public cloud, and hybrid cloud	Determined by the instructor			From NetApp
Attitude: Speed and accuracy in doing the right thing				From NetApp
Health & Safety: Compliance with safety protection in the workplace				
Environmental Consideration: Compliance with environmental protection				

Title: NetApp Products	time			
	theoretical	practical	total	
	Determined by the instructor			
Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - Explain how NetApp FAS systems and the Data ONTAP operating system establish the foundation for shared IT infrastructures - Describe the advantages that E-Series storage systems bring to application-managed SAN workloads - Describe the features and benefits NetApp flash portfolio - Describe the NetApp cloud strategy	Determined by the instructor			From NetApp
Attitude: Speed and accuracy in doing the right thing				
Health & Safety: Compliance with safety protection in the workplace				
Environmental Consideration: Compliance with environmental protection				

Title: Data ONTAP 7-Mode Fundamentals	time			
	theoretical	practical	total	
	Determined by the instructor			
Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - Explain the basic features and functions of the Data ONTAP 7-Mode operating system - Describe how the WAFL® (Write Anywhere File Layout) file system processes read and write requests - Identify basic hardware components, such as storage controllers, storage shelves, and network switches - Connect to a NetApp storage system using NetApp OnCommand™ system Manager and the command-line interface - Perform basic system administration tasks to manage and protect data - Use message logging and NetApp support features to maintain a NetApp storage system	Determined by the instructor			From NetApp
Attitude: Speed and accuracy in doing the right thing				
Health & Safety: Compliance with safety protection in the workplace				
Environmental Consideration: Compliance with environmental protection				

Training standard
 Contents analysis form

Title: Basic NetApp Configuration and Administration tasks	time			
	theoretical	practical	total	
	Determined by the instructor			
Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - Explain features of the Data ONTAP operating system - Use the CLI and OnCommand System Manager to identify storage components Configure storage systems and storage virtual machines (SVMs) for NAS and SAN client access - Create FlexVol volumes, qtrees, and LUNs Manage Snapshot copies and FlexClone Software - Manage volume move and storage efficiency	Determined by the instructor			From NetApp
Attitude: Speed and accuracy in doing the right thing				
Health & Safety: Compliance with safety protection in the workplace				
Environmental Consideration: Compliance with environmental protection				

Title: Basics of SAN	time			
	theoretical	practical	total	
	Determined by the instructor			
Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - Define the characteristics of a SAN and explain how LUNs relate to the Data ONTAP storage system - Describe the components of FC, FCoE, and IP SANs - Create and manage LUNs on NetApp storage systems running 7-Mode and clustered Data ONTAP - Explain the multipathing options that are available for FC and iSCSI - Describe the features and components of a scalable SAN	Determined by the instructor			From NetApp
Attitude: Speed and accuracy in doing the right thing				
Health & Safety: Compliance with safety protection in the workplace				
Environmental Consideration: Compliance with environmental protection				

Training standard

Contents analysis form

Title: Basics of Virtualization	time			
	theoretical	practical	total	
	Determined by the instructor			
Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - explains the basics of virtualization. You should be able to describe the benefits of virtualization and how NetApp and VMware work together to provide the best environment.	Determined by the instructor			From NetApp
Attitude: Speed and accuracy in doing the right thing				
Health & Safety: Compliance with safety protection in the workplace				
Environmental Consideration: Compliance with environmental protection				

Training standard
Contents analysis form

Title:	time			
	theoretical	practical	total	
	CIFS Administration	Determined by the instructor		
Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - Identify a server environment that enables your NetApp storage system to support Windows client users - Configure CIFS on your storage system - Create and manage CIFS shares - Configure share-level and file level security on the storage system - Administer and manage a storage system in a CIFS environment - Troubleshoot basic issues in the CIFS environment - Describe the NetApp Windows Storage Consolidation solution - Use the FAStChoice System Selector tool to size a Windows Storage Consolidation solution	Determined by the instructor			From NetApp
Attitude: Speed and accuracy in doing the right thing				
Health & Safety: Compliance with safety protection in the workplace				
Environmental Consideration: Compliance with environmental protection				

Training standard

Contents analysis form

Title: NFS administration	time			
	theoretical	practical	total	
	Determined by the instructor			
Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - Provide an overview of the NFS protocol - Configure the NFS protocol on a NetApp storage system - Administer NFS exports and mounts - Manage NFS performance for NetApp storage systems and clients - Troubleshoot basic NFS problems	Determined by the instructor			From NetApp
Attitude: Speed and accuracy in doing the right thing				
Health & Safety: Compliance with safety protection in the workplace				
Environmental Consideration: Compliance with environmental protection				

Training standard

Contents analysis form

Title: Clustered Data ONTAP Fundamentals	time			
	theoretical	practical	total	
	Determined by the instructor			
Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - Identify the enhanced feature set available in clustered Data ONTAP - Identify the key benefits of clustered Data ONTAP - Identify the basic architecture of clustered Data ONTAP - Create an aggregate - Create a data virtual storage server (Vserver) - Create flexible volumes - Identify supported data access protocols - Create a data logical interface - Create a distributed namespace - Move a volume to another node in the cluster - Perform Snapshot operations - Create a data protection mirror and replicate to it - Discuss the benefits of SnapVault for clusters	Determined by the instructor			From NetApp
Attitude: Speed and accuracy in doing the right thing				
Health & Safety: Compliance with safety protection in the workplace				
Environmental Consideration: Compliance with environmental protection				