استاندارد آموزش شایستگی

MikroTik Certified Inter-networking Engineer (MTCINE)

گروه شغلی

فناوری اطلاعات

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نسخه			شناسه شایستگی				شناسه شغل			شناسه گروه	سطح مهارت	Isco-۰۸			
۱	۱	۰	۰	۷	۷	۱	۳	۵	۰	۴	۳	۲	۵	۲

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Ministry of cooperatives
Labour and Social Welfare

Iran Technical and Vocational
Training Organization

Deputy of training

Plan and curriculums office

Competency Training standard

Title

MikroTik Certified Inter-networking Engineer (MTCINE)

Occupational group

Information Technology(IT)

International code

2523-53-102-1

Date of standard compilation : 2015/10/13

Control of board on content compilation and accreditation: Plan and curriculums office

National code: **2523-53-102-1**

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Cooperator Specialized organizations for compiling the training standard:

- Iran Information Technology Development Co
- Iran Information Technology Development University
-Zanjan Center Technical and Vocational Training Organization

Revision Process:

- Scientific content
- According to market
- Equipment
- Tools

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Iran Technical and Vocational
Training Organization

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 wetter 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:	
MikroTik Certified Inter-networking Engineer(MTCINE)	

MTCINE is the highest degree about MikroTik. . In comparison to CISCO , it is similar to CCIE. This course is about advance technologies and protocols which are used by service provider and ISPs. The holder of MTCINE Certification knows advance options about BGP protocol and also MPLS protocol, and traffic engineering to.

The holder of MTCRE certification have following proficiency :
- Will have the ability to understand and implement BGP protocol.
- Will have the ability to understand and implement MPLS protocol
- Will have the ability to understand and implement Traffic Engineering

admission requirements:

minimum degree of education: Post first year of high school
minimum physical and mental ability:-
prerequisite skills: CompTIA Network+ certification – MTCNA Certification

Course duration:

Course duration : 64 hours

Course Evaluation :(%)

Number of questions	25
Passing score	60%
Conditional	50-59%
Fail	0-49%
Duration	60 Minutes
Available Language	English
Associated Certification	MTCINE

IRANTVTO Evaluation :(%)

Written Examination:25%
Practical Examination:65%
Ethics:10%
- MTCINE degree holders with 2 years experience
- Computer related Bachelor with 2 years experience

competency training standard

tasks

Row	Title
1	**BGP**
2	**MPLS**
3	**Traffic Engineering**

Training standard

Contents analysis form

Title: BGP	time			Equipments ,tools, materials ,books
	theoretical	practical	total	
	Determined by the instructor			

Knowledge ,skill ,attitude ,safety, Environmental Consideration				Equipments ,tools, materials ,books
Knowledge and Skill: - What is Autonomous System - What is BGP? - Path Vector algorithm - BGP Transport and packet types - iBGP and eBGP + LAB - Stub network scenarios and private AS removal + - Non-stub scenarios + LAB - iBGP and eBGP multihop and loopback usage + L - Route distribution and routing filters +LAB - BGP best path selection algorithm - BGP prefix attributes and their usage + LAB - BGP route reflectors and confederations + LAB	Determined by the instructor			- Internet connection - MikroTik Wiki - Computer with at least 4Gbiga byte Of RAM - VMware software
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: MPLS	time			
	theoretical	practical	total	
	Determined by the instructor			

Knowledge ,skill ,attitude ,safety, Environmental Consideration	Equipments ,tools, materials ,books

Knowledge and Skill:	Determined by the instructor			- Internet connection - MikroTik Wiki - Computer with at least 4Gbiga byte Of RAM - VMware software
- What is MPLS (basics) - Static Label Mapping + LAB - Label Distribution (LDP) + LAB - What is Penultimate-hop-popping - MPLS traceroute differences - LDP based VPLS tunnels + LAB - What is Bridge Split Horizon + LAB - VPLS Control Word (CW) usage - L2MTU importance and MPLS fragmentatio - BGP based VPLS + LAB - VRF and route leaking + LAB - L3VPN (BGP based Layer3 tunnels) + LAB - OSPF as CE-PE protocol				

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: Traffic Engineering	time			
	theoretical	practical	total	
	Determined by the instructor			

Knowledge ,skill ,attitude ,safety, Environmental Consideration		Equipments ,tools, materials ,books
Knowledge and Skill: - What is traffic engineering and how it works - RSVP, Static path, dynamic path (CSPF) + LAB - Bandwidth allocation and bandwidth limitation differences and settings + LAB	Determined by the instructor	- Internet connection - MikroTik Wiki - Computer with at least 4Gbiga byte Of RAM - VMware software
Attitude: Speed and accuracy in doing the right thing		
Health & Safety: Compliance with safety protection in the workplace		
Environmental Consideration: Compliance with environmental protection		

Equipment & Tools & Materials & Resources (books, site, software…) form mikrotik.com and wiki.mikrotik.com

*Required quantity for each 15 Trainees

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