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**

Revision Process:

- Scientific content
- According to market
- Equipment
- Tools

Plan & Curriculum Office

97, Nosrat Avenue –Tehran, Iran

Tel:+98-21-66569900-9

Fax: +98-21-66944117

E-mail:Barnamehdarci@yahoo.com

	Name & family name	Academic document	field	Job & post	Relevant experiences	Add & tell & email
1	Elahe Shahidi Arqini	M.Sc.	Software Engineering	Manager	Technical and Vocational Training Organizatio	Elahe.shahidi2003@gmail.com Zanjan 09127437670
2	Hamed Razani Feqhi	B.Sc	Software Engineering	Manager	Dana Geophysics IT Unit	Razani.hamed@yahoo.com Tehran 09196162453
3	Behrouz Soleymani	PHD	Software Engineering	Manager	Noran	systemyarteacher@yahoo.com Tel :
4	Mani Raissdana	B.Sc	Software Engineering	Manager	International Trainer	m.raissdana@mits-co.com Tel : 09121497009
5	Abbas Ashourlou	B.Sc	Software Engineering	Manager	Technical and Vocational Training	Hamedan Tel:

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

4

competency training standard

tasks

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

Training standard

Contents analysis form

Title: BGP	time			
	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
- What is MPLS (basics)				- MikroTik Wiki
- Static Label Mapping + LAB				- Computer with at least 4Gbiga byte Of RAM
- Label Distribution (LDP) + LAB				- VMware software
- 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

 From CompTIA