



NETWORKING WITH CISCO & MIKROTIK

VM & NETWORKING SEMINAR (MAY 23, 2017)

i-BEAM
steering ahead
YANGON, MYANMAR

Presenters:

Lay Minh (Makito) : MikroTik Certified Trainer/Consultant, CCIE # 47682
Phyo Phyo Hein : MikroTik Certified Trainer/Consultant
CCNA R&S, CCNP R&S, CCIP, CCIE Written

ABOUT US



○ Lay Minh (Makito)

- MikroTik Certified Trainer & Consultant
- Chief Technology Officer @ i-BEAM
- Experiences:
 - 12 years in ISP industry since 2005
 - Billing solutions for service providers
 - ISP core network design and operations



CCIE # 47682

• Certifications:



CERTIFIED
ASSOCIATE

JNCIA-Junos
JNCDA



CERTIFIED
SPECIALIST

JNCIS-SP



- Areas of interest: BGP, MPLS, IPv6



ABOUT US



○ Phyto Phyto Hein

- MikroTik Certified Trainer & Consultant
- Director of Information Beam Co., Ltd.
- Experiences:
 - Cisco instructor since 2005 at i-BEAM Co., Ltd
 - SingTel Mobile Support Network Engineer at NCS Co., Ltd (2008-2010)
 - Nera Telecommunications (Singapore) (2011-2012)
 - System Integration Manager at Yatanarpon Teleport (2012-2014)
 - Enterprise/ISP Manager at Kinetic Myanmar Technology (2014-2016)
- Certifications:



UCSY
B. C. Tech
(hons)



JUNIPER
NETWORKS
CERTIFIED
ASSOCIATE





NETWORKING WITH CISCO & MIKROTIK

Networking Industry
About Cisco
About MikroTik
Cisco vs. MikroTik
Vendor Certifications

NETWORKING INDUSTRY



- Generally there are three kinds of network deployment depending on the size of the organization.
- SOHO (Small Office Home Office)
 - Coffee shops, Restaurants, Internet café
- Enterprise
 - Small Medium Enterprise (SME)
 - Banks, Hotels, Hospitals, Shopping malls
 - Schools and Universities
- Service Providers
 - Datacenters
 - Internet Service Providers (ISP)
 - Application Service Providers (ASP)



IT NETWORKING ROLES

- Data communication network is a must in most of the business operations .
- Use cases – Internet, E-mail, Web browsing, eCommerce, eBanking, eLearning, eGovernment...etc.
- Everyone needs reliable, robust and secure networking devices and high technologies.
- Many networking devices vendors in the industry.
- Job opportunities:
 - Network Designers/Managers
 - Network Engineers
 - Network Support Technicians



ABOUT CISCO



- Cisco Systems Inc. (known as Cisco)
- Founded in 1984 by Leonard Bosack and Sandy Lerner, two Stanford University computer scientists
- Sells networking equipment (Routers, switches, telecommunication devices), software, and services.
- Headquarter is in San José, California, in the center of Silicon Valley, USA.
- One of the largest networking companies in the world.



ABOUT MIKROTIK

MikroTik



- Location:

Riga, Latvia



(Northern Europe)

- Produces router hardware and software.
- To make internet technology cheaper, faster, easier and reliable.
- MikroTik Slogan: Routing the World.
- Founder (1996): John Trully & Arnis Reikstins.



CISCO VS. MIKROTIK



Cisco	MikroTik
Reliable SMARTnet support BUT you need to pay for it	Official support (usually not very fast) Forum/Community support
Supports high-end requirements	Max 80Gbps throughput
Expensive	Cost-effective
Features are depending on models and activated licenses	All models share same features, just different capacity
CLI based, not easy for beginner	CLI, GUI, web based, more user-friendly
Real device labs are usually not affordable	Free 24 hours trial license on x86 Get a real device with all features at \$35
More common in DC/SP	More common in SOHO & SME
More certified engineers in industry	300+ certified engineers in Myanmar BUT still few compared to Cisco
Certificates have higher value	Certificates are not well-known

OTHER VENDORS



- There are a few well-known vendors in networking equipment industry:
 - Juniper Networks
 - U.S. company
 - Specialized on service provider devices
 - Huawei
 - Chinese company
 - Specialized on transmission network devices
 - Alcatel Lucent
 - French company
 - Focused on fixed, mobile and converged networking hardware



AS A NETWORK DESIGNER/MANAGER



- There are some key considerations of choosing networking equipment.

- **Budget**
 - CAPEX - Equipment cost, deployment cost
 - OPEX - HR cost, operation and maintenance cost

- **Applications & Services**
 - Protocols
 - Bandwidth/QoS requirement

- **Standards**
 - Compliance with national standards
 - International standards



AS A NETWORK ENGINEER

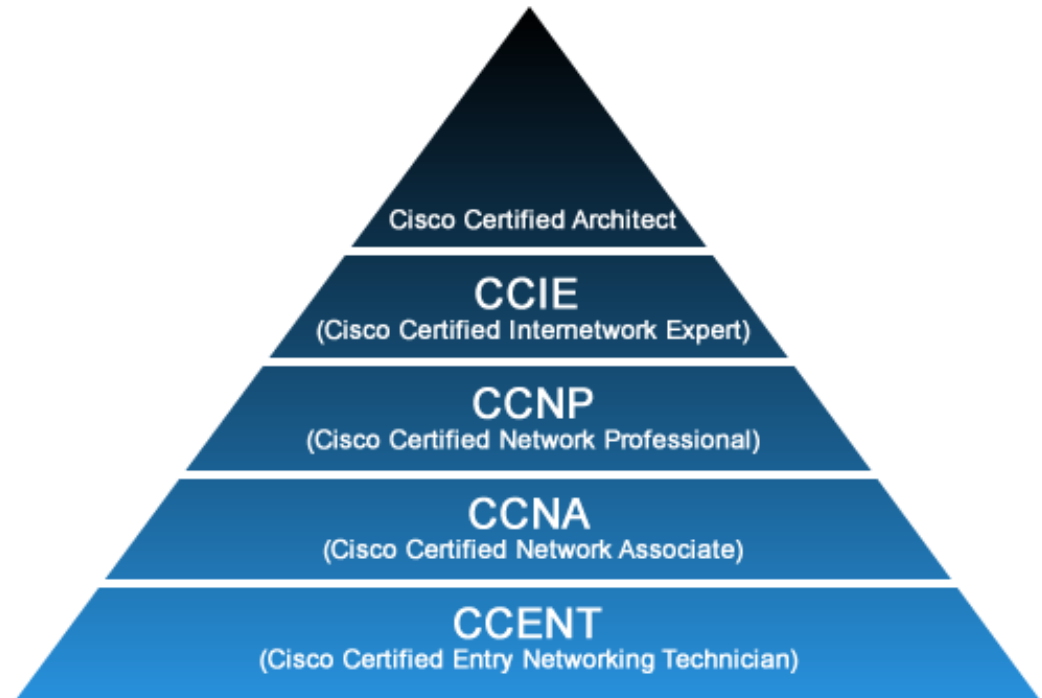
- Everyone wants good careers!
- **More money**
 - Sure you have to be **Strong & Smart**
 - Obtain industry qualifications
- **Less problems**
 - A good network design could really save **50% of your problems**
 - **Another 50%** is on implementation, choose correct equipment!
- **Office is near to home 😊**
 - Emm... This one Cisco or MikroTik **can't really help you...**
 - If you want, you can move your home! :D



CISCO CERTIFICATIONS

○ Certification Tracks:

- Routing & Switching
- Service Provider
- Datacenter
- Security
- Collaboration
- Wireless
- Design



○ Engineering Certificate Levels

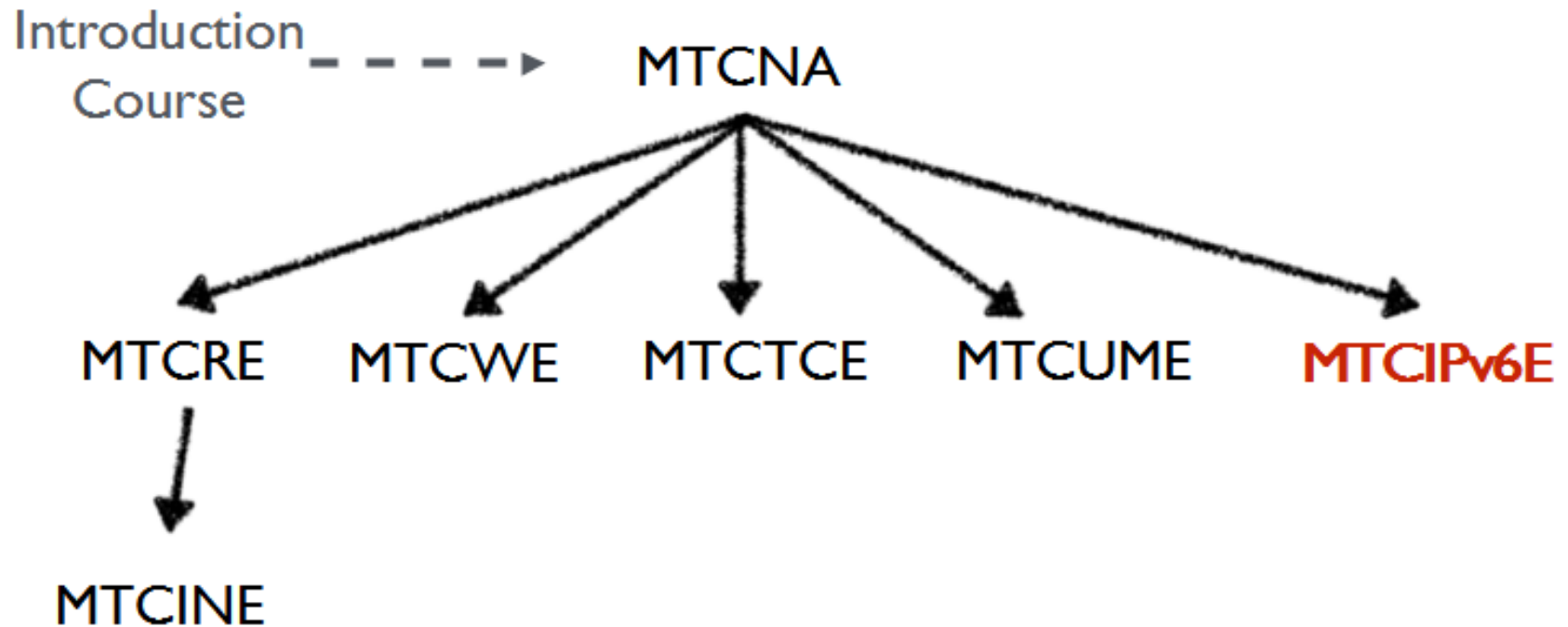
- CCENT → CCNA → CCNP → CCIE

○ Design Certificate Levels

- CCENT → CCDA → CCDP → CCDE → CCAr



MIKROTIK CERTIFICATIONS



- Five Certification Tracks covering Routing, Wireless, QoS, Security, and IPv6.
- Official exams are only available with MikroTik Academies or MikroTik Certified Trainers.



BENEFITS OF VENDOR CERTIFICATES

- Proof of your ability
 - For someone who DID NOT know you well
- Qualifies you to perform mission-critical tasks
 - Government tenders
 - International projects
- Value-added to company/organization
 - Some vendor partnerships required certified people:
 - Cisco Partner
 - MikroTik Consultant
 - MikroTik Distributor
- Skill Enhancement
 - Measurements and milestones along your way to professional



HOW TO BE CERTIFIED?

○ Training Cost

- CCNA R&S 250,000 – 300,000Ks
- CCNP R&S 300,000Ks+ per sub course
- CCIE 700,000Ks for written
- MTCNA 200,000Ks includes exam

○ Exam Cost

- CCNA R&S \$325
- CCNP R&S \$300 x 3
- CCIE \$450 for written + \$1,500 for lab
- MTCNA \$0, included in training

○ Time

○ Training Provider



I-BEAM'S DO & DON'T



○ We DO:

- Deliver knowledge
- Share real world experiences
- Help exam preparation
- Offer discount vouchers of our partnered test centers
- Assist your job application by issuing recommendation letter

○ We DON'T:

- Tell you how to play tricks
- Teach you how to cheat in exam
- Provide VCE or dump files
- Advertise full score or 100% on student exams



OUR TRAINING PROGRAMS

- All MikroTik Certification Training + Exam
- Cisco Certification (CCNA → CCNP → CCIE)
- VMware Virtualization
- Microsoft Certification
- Ubiquiti Certification Training + Exam
- Workshops
 - ISP Routing
 - Advanced MPLS
 - Network Design & Architecture
- Corporate Training
 - Train your staff with customized topics and flexible schedule





QUESTIONS & ANSWERS

If you have any questions,
please feel free to ask!



THE END

THANKS FOR YOUR ATTENTION!

Contact Us



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Information Beam



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