LEMURES TECHNOLOGIES

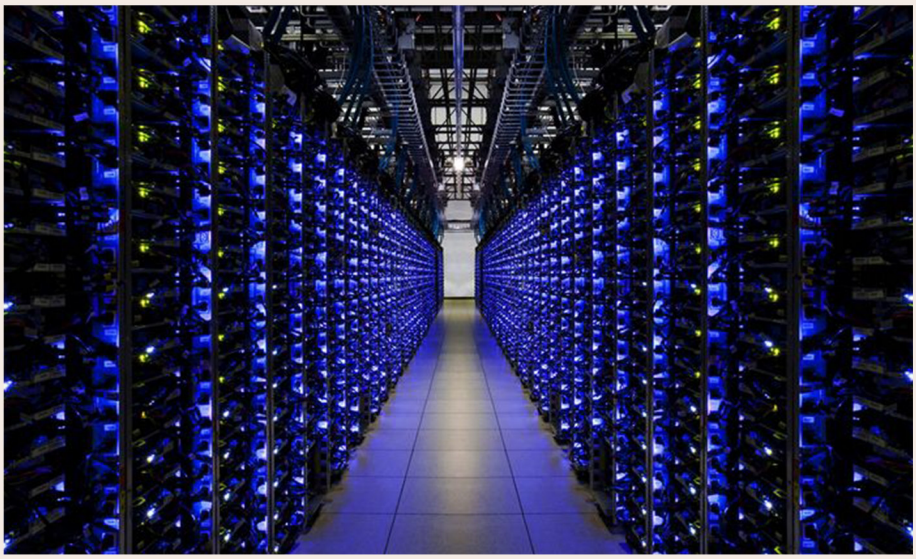
-Giving Structure To Your Dreams.

CISCO NETWORKING

UNDERSTANDING SECURITY BEYOND LIMITS

COURSE DESCRIPTION

This is a Penetration Testing & Information Security Workshop. Learning can be through theory and practice when theory is put into practice, there is a thin line between perfection and distortion. This workshop will provide you an intensive session which will empower you with knowledge; that is inaccessible to most, in a simplified and easily graspable manner. The objective is to provide web security to any and every user of the internet. In the workshop, we teach our students how hackers break into the systems and websites so as to make them aware of the possible loopholes and therefore, making them proficient in reverse-penetration. By doing so, they are able to create a virtual wall between their data and the penetrators. This workshop will enable you to carry out attacking as well defensive methodologies which will help you not only protect but also assess your safety and vulnerability ratio.



DELIVERY METHADOLOGY

- Instructor led Hands-On Workshop
- 16 Hours of Contact Training
- 2 Days (8 Hours x 2 Days)
- 7:3 Practical & Theory Ratio

COURSE OBJECTIVES

At the end of this course, students will be able to:

1) Understand and perform IP Addressing to various CISCO Routers.
2) Understand the concept of sub netting.
3) Configuring and apply different routing protocols like RIP,EIGRP,OSPF.
4) Understand and configure various security policies like ACL,Portgaurd.
5) Configure virtual lans for switched network.

INFRASTRUCTURE REQUIRED

1. A Seminar Hall
2. A Speaker and Microphone System in Hall
3. One LCD Projector for Live Demonstrations
4. Internet Connection with full Access

TARGET AUDIENCE & PREREQUISITES

1. Under-Graduate and Post-Graduate students from Computers and Electronics background. However students from other branches with the incline towards Information Technology must also be encouraged to participate.
2. All the members of faculty with an inclination towards Cyber Security can be the part of workshop.
3. Basic knowledge of computers and Internet Technologies will be wonderful.

TAKE AWAY

INSTANT INTERNSHIP

At least 1 participant will be selected during the workshop who will be declared as a workshop topper based on the examination conducted a live project in our R&D Lab.

CERTIFICATION

- Globally accepted certification will be provided after completion of respected training.
- Certifications will be provided, If the participant complete the examination.

SECURE TOOLKIT

Each participant will get practical Toolkit (E-tool Kit) with tools used during the workshop, white papers and other support software.

WORKSHOP CONTENTS

1.0 NETWORK FUNDAMENTALS

- Compare and contrast OSI and TCP/IP Models
- Compare and contrast OSI and TCP/IP Protocols
- Describe the impact of infrastructure components in an enterprise network
  1. Firewalls
  2. Virtual Services
  3. Basic virtual network infra

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2.0 NETWORK FUNDAMENTALS CONTD.

- Compare and contrast collapsed core and tree-tier architechtures
- Compare and contrast network topologies
  1. Star
  2. Mesh
  3. Hybrid

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3.0 TROUBLESHOOTING

- Apply troubleshooting methodologies to resolve problems
  1. Perform and document fault isolation
  2. Resolve or escalate
  3. Verify and monitor resolution
- Configure, verify and troubleshoot IPv4 addressing and subnetting
- Describe the need for private IPv4 addressing

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4.0 LAN SWITCHING TECHNOLOGIES

- Describe and verify switching concepts
  1. MAC learning and aging
  2. Frame switching
  3. Frame flooding
  4. MAC address table
- Interpret Ethernet frame format
- Troubleshoot interface and cable issues (collisions, errors, duplex, speed)

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5.0 VLAN AND STP

- Configure, verify, and troubleshoot VLANs (normal/extended range) spanning multiple switches
  1. Access ports (data and voice)
  2. Default VLAN
- Configure, verify and troubleshoot STP related optional features
  1. PortFast
  2. BPDU guard

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6.0 LAYER 2 & LAYER 3 PROTOCOLS

- Configure and verify Layer 2 protocols
  1. Cisco Discovery Protocol
  2. LLDP
- Configure, verify, and troubleshoot (Layer 2/Layer 3) EtherChannel
  1. Static
  2. PAGP
  3. LACP
- Describe the benefits of switch stacking and chassis aggregation

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WORKSHOP CONTENTS

7.0 ROUTING TECHNOLOGIES

- Describe the routing concepts
1. Packet handling along the path through a network
2. Forwarding decision based on route lookup
3. Frame rewrite
- Interpret the components of a routing table :
  Prefix | Network mask | Next hop | Routing protocol code | Administrative distance | Metric | Gateway of last resort

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8.0 ROUTING TABLE WORKING

- Describe how a routing table is populated by different routing information sources
1. Admin distance
- Configure, verify, and troubleshoot inter-VLAN routing
2. Router on a stick
3. SVI
- Compare & contrast static routing & dynamic routing
- Compare & contrast distance vector & link state routing protocols

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9.0 INTERSWITCH

- Compare and contrast interior and exterior routing protocols
- Configure, verify, and troubleshoot IPv4 static routing
1. Default route
2. Network route
- Configure, verify, and troubleshoot interswitch connectivity
3. Trunk ports
4. Add and remove VLANs on a trunk
6. DTP, VTP (v1&v2), and 802.1Q
7. native VLAN

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MEET THE TRAINERS

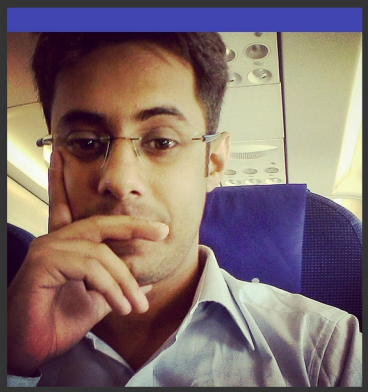
ABHIJIT BAKALE

SR. NETWORK ENGINEER | PUBLIC SPEAKER | SECURITY CONSULTANT

He is an avid network engineer with special interest in network security and design analysis. He has an experience of over 2300 hours of training in the network design & security space and has trained over 20000 individuals personally till date. His student base ranges from personnel from Indian Army, Government organizations, Top Universities, Network Security Professionals and engineering students. His students had kick-started their career in Networking domain and placed in various top MNCs around the globe including Cisco, Google, TCS, Orange etc..

HITANSH KATARIA

CYBER SECURITY EXPERT | PUBLIC SPEAKER | ENTREPRENEUR



He is an avid security researcher with special interest in network exploitation and web application security analysis.
He has an experience of over 3000 hours of training in the information security space and has trained over 5000 individuals personally till date.
His student base ranges from personnel from Indian Army, Intelligence Agencies, Special Task Force, Criminal Investigation Departments and engineering students.