COURSE SYLLABUS

Check Point Certified Security Administrator (CCSA)

50 Cragwood Rd, Suite 350
South Plainfield, NJ 07080

Victoria Commons, 613 Hope Rd Building #5,
Eatontown, NJ 07724

130 Clinton Rd,
Fairfield, NJ 07004

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Avtech Institute of Technology Course

Instructor:
Course Duration: 40 hours
Date/Time:
Training Location:

Course: ECWD 101

Text / Lab Books:

Recommended: visit www.microsoft.com/MSPress/books for books

TEXTBOOK:

- Configuring Check Point NGX VPN-1/FireWall-1, ISBN 159749-031-8
- Check Point Certified Security Administrator, ISBN 0-7821-4115-3
- Check Point Certified Security Expert, ISBN 0-7821-4116-1

CD:

- Check Point NGX CD (60 Days evaluation)

Course Description

Check Point Security Administration NGX is a foundation course for Check Point's flagship product, VPN-1/Firewall-1. This course covers configuring VPN-1/FireWall-1, and provides hands-on training managing a VPN-1/FireWall-1 installation.

Learning Objectives

1. Show how VPN-1 NGX components and Check Point's Secure Virtual Network
2. Architecture protects critical information assets.
3. Create rules and modify a Security Policy's properties.
4. Use advanced NGX features to minimize the information-security management burden, when working with objects and rules.
5. Use monitoring tools to track, monitor, and account for all connections logged by Check Point components.
6. Protect organizations from known network attacks and entire categories of emerging or unknown attacks, using SmartDefense. Detail a vehicle for delivery to the customer.
7. Use private IP-address allocation and unregistered internal addressing schemes, to

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overcome IP addressing limitations.

8. Identify and address NGX security issues, including encryption and Virtual Private Networks.
9. Verify the identity of users logging in to NGX, using NGX authentication schemes.
10. Implement LDAP, and integrate it with NGX SmartCenter Server.
11. Back up critical files and directories, for availability and timely recovery of Security gateways and SmartCenter Servers.

TENTATIVE SCHEDULE:

SESSION	DATE	MAJOR TOPIC	SUB-TOPICS
1		***Introduction to Firewall and VPN-1/FireWall-1***	- History of firewall - Packet filters - Application Layer Gateways - Statefull Inspection - Perimeter, Internal, and Web Security - Inspect Script
		What is New in NGX	- Smart Portal - Smart Defense/Web Intelligence - Eventia Reporter - VPN functionality - Secure Platform
2		***VPN-1/Firewall-1 Architecture***	- Smart Client - SmartCneter Server - Enforcement Module - SVN foundation - Secure Communications - Inspect Module Operation
		VPN-1/FirWall-1 Security Policy	- Introduction to firewall Security - Security Objects - Security Rules
3		***Advanced Security Policy and System Management***	- Improving Rule Management Performance
		SmartView Tracker	- Logging Architecture - Log view - Predefined Queries - Active View - Block Intruder

			- Log Maintenance

4		***Authentication***	- Managing users and administrators
			- Understanding authentication schemes
			  o User authentication
			  o Client authentication
			  o Session authentication

		Network Address Translation	- Configuring dynamic Hide Mode NAT - Configuring Static Mode NAT - Configuring Automatic NAT - Configuring Port Translation
5		***Planning your security architecture***	- Installation - Backup and restore - Uninstalling
		SmartDefense and Web Intelligence	- Tracking and Alerting - SmartDefense Configuration - Web Intelligence Technology - Malicious Code - Protocol Inspection - DShield Storm Center
6		***Load Balancing***	- Load Balancing Architecture - Implementing Load Balancing
7		***Content Security***	- Creating Content Security Object - Security Server
8		***VPN***	- Encryption Overview - IKE Encryption Scheme - Simplified VPNs
		SecureRemote, SecureClient and Integrity	- Setting up and deploying SecureRemote - SecureClient - Secure Configuration Verification

Note: This syllabus is subject to revision

Prerequisite

§ Individuals seeking the Check Point Certified Security Administrator (CCSA) NGX certification.

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§ Systems administrators, security managers, and network engineers who manage VPN-1/FireWall-1 Gateway deployments

Strong networking and TCP/IP knowledge

Contact Hours

_____ Contact Hours (Lecture ___ Hours / Lab ____ Hours)

Semester Credit Hours

_____ semester credit hours

Teaching Strategies

A variety of teaching strategies may be utilized in this course, including but not limited to, lecture, discussion, written classroom exercises, written lab exercises, performance based lab exercises, demonstrations, quizzes and examinations. Some quizzes may be entirely or contain lab based components. A mid-course and end course examination will be given.

Method of Evaluating Students

Grade Distribution

Class Attendance	10
Mid Term	30
Finals	50
Special Projects Makeup projects	10
Total	**100%**

Grading Policy

At the end of each course, each student is assigned a final grade as follows:

Point Range	Interpretation	Grade	Quality Points
90 – 100	Excellent	A	4.0
80 – 89	Very Good	B	3.0 – 3.9
70 – 79	Average	C	2.0 – 2.9
60 – 69	Poor	D	1.0 – 1.9
Below 60	Failure	F	0
N/A	Withdrawal	W	0
N/A	Pass	P	0
N/A	Incomplete	I	0

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A student earning a grade of D or above is considered to have passed the course and is eligible to pursue further studies. A student receiving a grade of F has failed the course. A failed course must be repeated and passed to meet Avtech Institute's graduation requirements, in addition to an overall program GPA of 2.0.

Requirements for Successful Completion of the Course

At a minimum, students must achieve the following:

- A passing grade of **D** or above
- Completion of all required examinations
- Submission of all required lab exercises and projects and;
- Adherence to the school attendance policy.

Equipment Needed

Industry standard desktop computer for lab exercises.

Equipment Breakdown Lab room

Videos and Projector

Library Assignments

To be determined by the instructor.

Portfolio Assignment

Student program outcome portfolios are required to demonstrate student competencies. In conjunction with your course structure, please select a project/paper that best demonstrates what you have learned in this course and add it to your program portfolio.

Course Policies

Disruptive Behavior

Disruptive behavior is an activity that interferes with learning and teaching. Inappropriate talking during class, surfing inappropriate website, tardiness, cheating, alcohol or drug use, use of cell phone, playing lout music during class, etc. all disrupt the learning process.

Copyright Infringement

Specific exemptions to copyright infringement are made for student use in the context of learning activities. Graphic design students often download images from the Internet, or scan images from publications. As long as this work is for educational purpose, and subject to faculty permission, this is not a problem.

Plagiarism

Faculty cannot tolerate the ***misrepresentation of work as the student's own***. This often involves the use by one student or another student's design, whether voluntarily or involuntarily. In the

event that plagiarism is evident and documented, all students involved in the conscious decision to misrepresent work must receive an F as the grade for the project. A second occurrence may result in suspension for the rest of the quarter, and return to the school only after a review by the Academic Standards Committee.

Attendance

Attendance and Lateness

In education and the workplace, regular attendance is necessary if individuals are to excel. There is a direct correlation between attendance and academic success. Attendance is mandatory. All students must arrive on time and prepared to learn at each class session. At the faculty member's discretion, students may be marked absent if they arrive more than 15 minutes late to any class. More that five absences in a class that meets twice per week or more that two absences in a class that meets once per week may result in a failure.

Make-Up Work

Late Projects and Homework

All projects and homework must be handed in on time. Homework should be emailed to your instructor if you are going to miss a class. Work that is submitted one week late will result in the loss of one full grade; and work that is submitted two weeks late will result in the loss of two full grades; more than two weeks late you will receive a failing grade on the project.

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