SYLLABUS

Securing Converged WANs

Variously listed as:
INT 678, INT 696, INT 696 CA, INT 696 VA

Instructor
Kevin A. Shaffer
Department of Inform. Networking and Telecom.
TH123D, 600 Park Street
Hays, KS 67601 USA
Voice Mail: 785-628-4484
Fax: 785-628-4098
E-mail: kshaffer@fhsu.edu

Classroom
On campus students will meet for Securing Converged WANs in TH 127 Lab at the assigned class time. Virtual Students will meet through the campus course management server (Blackboard). All students will work on lab exercises using the Netlab to gain access to the lab kit.

Required Text
On-line curriculum is available from your class page on the Academy Connection. You can also connect to the curriculum directly from the INT Departmental Server Securing Converged WANs. Login information will be provided by the instructor. Lab assignments are also included in the on-line curriculum.

Optional Text
If you are studying for the certification exam, a review/study guide is also recommended. Cisco Press publishes the CCNP ISCW Exam Certification Guide, not required but helpful. This text will cover nearly all the topics in the on-line curriculum.

Objectives
The main objective is to understand the features and issues of designing and managing secure WAN connections through curriculum study and lab work. Student’s may use this course to help prepare for the Cisco ISCW Certification exam.

Activities
Study the on-line curriculum, take the on-line quizzes and final, take the certification exam (possible), and complete at least 15 of the different lab assignments.

Grading
Undergraduate students
The course requirements for undergraduate students will be weighted in the following manner:

30% On-line quizzes (five quizzes)
30% On-line Final Exam
20% Lab Exercises
20% Your choice of one of the following ...

- Lab Exam (released in April)
- Certification Exam Score for 642-825 ISCW exam

The grade a student earns is based on a standard percentage scale:

A >93.0%
The course requirements for graduate students will be weighted in the following manner:

30% On-line quizzes (five quizzes)
30% On-line Final Exam
20% Lab Exercises
10% Lab Exam
10% Certification Exam Score for 642-825 ISCW exam

The grade a student earns is based on a standard percentage scale:

A >93.0%
B 82.0% ~ 92.9%
C 71.0% ~ 81.9%
D 60.0% ~ 70.9%
U <60%

Students are expected to produce high quality work and take an active role in advancing their knowledge. The instructor is available to discuss issues and assist the student in research to achieve this expectation.
Curriculum Modules and Related Labs

Module 1: Remote Network Connectivity Requirements
Lab:
There are no labs in this module.

Module 2: Teleworker Connectivity
Lab:
2.8.1 e-Lab Activity: PPPoE Simulation

Module 3: IPsec VPNs
Lab:
3.10.1 Lab 3.1 Configuring SDM on a Router
3.10.2 Lab 3.2 Configuring a Basic GRE Tunnel
3.10.3 Lab 3.3 Configuring Wireshark and SPAN
3.10.4 Lab 3.4 Configuring Site-to-Site IPsec VPNs with SDM
3.10.5 Lab 3.5 Configuring Site-to-Site IPsec VPNs with the IOS CLI
3.10.6 Lab 3.6 Configuring a Secure GRE tunnel with SDM
3.10.7 Lab 3.7 Configuring a Secure GRE tunnel with the IOS CLI
3.10.8 Lab 3.8 Configuring IPsec VTIs
3.10.9 Lab 3.9 Configuring Easy VPN with SDM
3.10.10 Lab 3.10 Configuring Easy VPN with the IOS CLI

Module 4: Frame Mode MPLS Implementation
Lab:
4.5.1 Lab 4.1 Configuring Frame Mode MPLS
4.5.2 Lab 4.2 Challenge Lab: Implementing MPLS VPNs (Optional)

Module 5: Cisco Device Hardening
Lab:
5.12.1 Lab 5.1 Using SDM One-Step Lockdown
5.12.2 Lab 5.2 Securing a Router with Cisco AutoSecure
5.12.3 Lab 5.3 Disabling Unneeded Services
5.12.4 Lab 5.4 Enhancing Router Security
5.12.5 Lab 5.5 Configuring Logging
5.12.6a Lab 5.6a Configuring AAA and TACACS+ (Optional)
5.12.6b Lab 5.6b Configuring AAA and RADIUS (Optional)
5.12.6c Lab 5.6c Configuring AAA Using Local Authentication
5.12.7 Lab 5.7 Configuring Role-Based CLI Views
5.12.8 Lab 5.8 Configuring NTP

Module 6: Cisco IOS Threat Defense Features

Lab:
6.6.1 Lab 6.1 Configuring a Cisco IOS Firewall Using SDM
6.6.2 Lab 6.2 Configuring CBAC
6.6.3 Lab 6.3 Configuring IPS with SDM
6.6.4 Lab 6.4 Configuring IPS with CLI

Case Studies

Lab:

Case Studies and Lab Exams are provided by the Instructor