CCRI Networking Technology IV  CNVT-1840  Spring 2016

Instructor   John Mowry
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E-mail   jmowry@ccri.edu

Office Hours  Room 2126
Class Sections  104 Tuesday & Thursday 6:00PM-9:50PM, starts 3/31, ends 5/12

Instructional Material and Web Sites
CCRI Lesson Web Site  http://netacad.com/ (Connecting Networks 5.03)
Cisco Academy Assessment  http://netacad.com/

Grading Policies
Skills:
- Journal-Entries  5%
- Labs and Class Participation  10%
- Case Study and Presentation  10%
- Research Paper  10%  Due May 3, 2015  11:00 AM
- Practical Final  30%

Academic:
- Quizzes  15%
- Final  20%

Course Outcomes:

Upon completion of this course, students will be able to:

- Describe the impact of Voice Over IP and Video Over IP applications on a network
- Identify and correct common network problems at layers 1, 2, 3, and 7 using a layered model approach
- Interpret network diagrams
- Describe the components required for network and Internet communications
- Implement basic switch security measures such as port security, trunk access, and management VLANs
- Explain the operation and benefits of DHCP and DNS
- Configure, verify, and troubleshoot DHCP and DNS operations on a router
- Describe current network security threats and explain how to implement a comprehensive security policy to mitigate common threats to network devices, hosts, and applications
- Describe the functions of common security appliances and applications
- Describe recommended security practices to secure network devices
- Describe the purpose and types of access control lists (ACLs)
- Configure and apply ACLs based on network filtering requirements
- Configure and apply an ACLs to limit Telnet and SSH access to the router using the Security Device
- Manager command-line interface (SDM/CLI)
- Verify, monitor, and troubleshoot ACLs in a network environment
- Explain the basic operation of Network Address Translation (NAT)
- Configure NAT for given network requirements using SDM/CLI
- Troubleshoot NAT issues
- Describe different methods for connecting to a WAN
- Configure and verify a basic WAN serial connection
- Configure and verify a Point-to-Point Protocol (PPP) connection between Cisco routers
- Configure and verify Frame Relay on Cisco routers
- Troubleshoot WAN implementation issues
- Describe the importance, benefits, role, impact, and components of VPN technology

Other Policies

1. The student expected to complete the On-Line lessons outside of class time.
2. Late assignments will be penalized 20 points.
3. Assignments late more than one class period will not be accepted.
4. All assignments must be completed using a word processor.
5. Students are responsible to see the instructor about any work missed due to absence.
6. Students who miss a quiz must take the quiz within two classes of the original quiz date.
7. Students are expected to participate as a member of teams
8. Students must pass both the Skills based portion in addition to the Academic portion of the curriculum to pass the course.
9. Student’s final grade can only raise one letter grade above the on-line final exam score based on other class assignments.
10. Students are allowed a maximum of three (3) re-takes of chapter quizzes per the semester.
11. All re-takes must be completed prior to the final exam, without exception.
<table>
<thead>
<tr>
<th>Class</th>
<th>Lesson</th>
<th>Exam</th>
<th>Subjects</th>
<th>Labs/Projects</th>
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<tr>
<td>March 31</td>
<td>1</td>
<td></td>
<td>Hierarchical Network design</td>
<td>1.4.1.2 Skills Integration Challenge - OSPF (PKA) Class</td>
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<tr>
<td>April 5</td>
<td>2</td>
<td>1</td>
<td>Connecting to the WAN</td>
<td>1.4.1.3 Skills Integration Challenge - EIGRP (PKA) Class</td>
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<tr>
<td>April 7</td>
<td>3</td>
<td>2</td>
<td>Point-to-Point Connections</td>
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<tr>
<td>April 12</td>
<td>4</td>
<td>3</td>
<td>Frame Relay</td>
<td>Class</td>
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<tr>
<td>April 14</td>
<td>5</td>
<td>4</td>
<td>Network Address Translation for IPv4</td>
<td>Class</td>
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<tr>
<td>April 19</td>
<td>6</td>
<td>5</td>
<td>Broadband Solutions</td>
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<tr>
<td>April 21</td>
<td>7</td>
<td>6</td>
<td>Securing Site-to-Site Connectivity</td>
<td>7.2.2.5 Configuring Dynamic and Static NAT Class</td>
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</tbody>
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Cisco 3 Course Outline Fall 2013 7.5 Week MW
<table>
<thead>
<tr>
<th>Date</th>
<th>Week</th>
<th>Lab</th>
<th>Activity</th>
<th>Topics</th>
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</thead>
<tbody>
<tr>
<td>April 26</td>
<td>8</td>
<td>7</td>
<td>Monitoring the Network</td>
<td>7.2.2.3 Configuring GRE (PKA) &lt;br&gt;7.3.2.8 Configuring GRE over IPsec (PKA) &lt;br&gt;Recommended</td>
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<tr>
<td>April 28</td>
<td>9</td>
<td>8</td>
<td>Troubleshooting the Network</td>
<td>8.1.2.6 Configuring Syslog and NTP Class &lt;br&gt;8.2.2.4 Configuring SNMP Class</td>
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<td>May 3</td>
<td></td>
<td>9</td>
<td>Project Presentations</td>
<td>8.3.3.3 Collecting and Analyzing NetFlow Data Class &lt;br&gt;9.2.3.12 Troubleshooting Enterprise Networks 1 (PKA) &lt;br&gt;Recommended &lt;br&gt;9.2.3.13 Troubleshooting Enterprise Networks 2 (PKA) &lt;br&gt;Recommended &lt;br&gt;9.2.3.14 Troubleshooting Enterprise Networks 3 (PKA) &lt;br&gt;Recommended</td>
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<tr>
<td>May 5</td>
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<td>Practical Exam / Final</td>
<td>Research Paper Due &lt;br&gt;Final Skills Assessment</td>
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<td>May 10</td>
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<td>Practical Exam / Final</td>
<td>Final Skills Assessment</td>
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<td>May 12</td>
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<td>Practical Exam / Final</td>
<td>Final Skills Assessment</td>
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**Practical Exam Schedule will be chosen by computerized random draw!**