

Department of Labor & Industries  
 Apprenticeship Section  
 PO Box 44530  
 Olympia WA 98504-4530



# REQUEST FOR REVISION OF STANDARDS

O.M.  
 L&I apprenticeship coordinator

TO: Washington State Apprenticeship & Training Council

From: WTIA WIAC (Program 1982)  
(NAME OF PROGRAM STANDARDS)

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Please update our standards to reflect the following changes:

Additions are Underlined  
 Redactions are ~~Struck Through~~

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Occupational Objective(s)

SOC#

Term

NETWORK SECURITY ADMINISTRATOR

15-1142.00

2000 HOURS

I. GEOGRAPHIC AREA COVERED:

The area covered by these Standards shall be the state of Washington, and the following counties in the state of Oregon: Multnomah, Columbia, Washington, Clackamas, and Lane.

Applicants and apprentices please note that while the state of Washington has no responsibility or authority in the state of Oregon, the WTIA WIAC will apply the same standards and guidelines to apprentices registered in the program while working in the state of Oregon.

IV. TERM OF APPRENTICESHIP:

The term of apprenticeship for ~~Database Administrator~~ all occupations covered by these standards shall be 2000 hours of reasonably continuous employment and demonstrated competency in the occupational objective.

VIII. WORK PROCESSES:

B. Network Security Administrator

APPROXIMATE HOURS

- |   |            |
|---|------------|
| 1. <u>Install and configure firewalls and routers.....</u>  | <u>300</u> |
| 2. <u>Review monitoring and security system logs (i.e. intrusion detection system, firewall system logs, etc.) and directly remediate or coordinate remediation of identified issues.....</u> | <u>400</u> |
| <u>Configure and troubleshoot security services .....</u>   | <u>400</u> |
| <u>IPS (Intrusion Prevention Systems)</u>   |            |
| <u>IDS (Intrusion Detection Systems)</u>  |            |
| <u>URL Filters</u>  |            |
| <u>DDOS (Distributed Denial of Service) protection</u>  |            |

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- 4. Configure and troubleshoot site to site IPSVPN (Internet Protocol Security Virtual Private Networks) on router and firewall platforms.....100
  - 5. Install, configure and troubleshoot remote access VPN (Virtual Private Network) solutions.....100
  - 6. Configure and troubleshoot DMVPN (Dynamic Multipoint Virtual Private Network) topologies.....100
  - 7. Work directly with customers to resolve firewall and security issues.....300
  - 8. Compose and write detailed design and customer documentation as required.....100
  - 9. Perform other duties as assigned.....200
- TOTAL HOURS 2000

IX. RELATED/SUPPLEMENTAL INSTRUCTION

(274) Minimum RSI hours per year defined per the following (See WAC 296-05-316(6)):

- 1. Database Administrator.....271
- 2. Network Security Administrator.....372

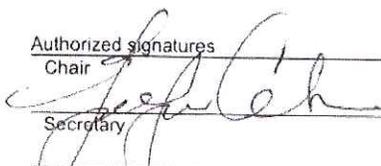
\*Note: Hours may be increased to meet changing industry needs, as determined by the committee.

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Authorized signatures Chair 	Approved by: Washington State Apprenticeship & Training Council Secretary of WSATC:
Secretary	Date:
Date: <u>3/15/16</u>	

# Apprenticeship Related/Supplemental Instruction (RSI) Plan Review

**RECEIVED BY L&IAC:**

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Program Sponsor: WTIA WIAC (Program 1982)	
Skilled Occupational Objective: Network Security Administrator	
Term/OJT Hours: 2000	Total RSI Hours: 372
Training Provider: WTIA Workforce Institute – Training Trust	

- By the signature placed below, the **program sponsor** agrees to provide the prescribed RSI for each registered apprentice and assures that:
  1. The RSI content and delivery method is and remains reasonably consistent with the latest occupational practices, improvements, and technical advances.
  2. The RSI is coordinated with the on-the-job work experience.
  3. The RSI is provided in safe and healthful work practices in compliance with WISHA and applicable federal and state regulations.

	Jennifer Carlson
Signature of Program Sponsor	Print Name

- By the signature placed below, the **training provider** assures that:
  1. The RSI will be conducted by instructors who meet the qualifications of "competent instructor" as described in WAC 296-05-003.
    - a. Has demonstrated a satisfactory employment performance in his/her occupation for a minimum of three years beyond the customary learning period for that occupation; and
    - b. Meets the State Board for Community and Technical Colleges requirements for a professional-technical instructor (see WAC 131-16-080 through -094), or be a subject matter expert, which is an individual, such as a journey worker, who is recognized within the industry as having expertise in a specific occupation; and
    - c. Has training in teaching techniques and adult learning styles, which may occur before or within one year after the apprenticeship instructor has started to provide the related technical instruction.
  2. If using alternative forms of instruction, such as correspondence, electronic media, or other self-study, such instruction is clearly defined.

	Jennifer Carlson
Signature of Training Provider	Print Name
Executive Director	WTIA Workforce Institute
Title	Organization

*(If additional training providers, please provide information and signatures on next page.)*

**SBCTC Program Administrator** has reviewed RSI plan and recommendations of the Trade Committee.

Signature of SBCTC Program Administrator	Print Name	Date

- SBCTC recommends approval     
  SBCTC recommends return to sponsor

[F100-519-000 RSI - Apprenticeship Related Supplemental Instruction \(RSI\) Plan Review Glossary of term](#)  
[F100-521-000 Apprenticeship Related Supplemental Instruction \(RSI\) Plan Review Criteria](#)

Additional training provider (if necessary)

Signature of Training Provider	Print Name
Title	Organization

Additional training provider (if necessary)

Signature of Training Provider	Print Name
Title	Organization

Additional training provider (if necessary)

Signature of Training Provider	Print Name
Title	Organization

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Program Sponsor:	WTIA WIAC (Program 1982)
Skilled Occupational Objective:	Network Security Administrator

**NOTE:** The description of each element must be in sufficient detail to provide adequate information for review by the SBCTC and review committee.

**Describe minimum hours of study per year in terms of (check one):**

- 12-month period from date of registration  
 Defined 12-month school year  
 2,000 hours of on-the-job training

Element/course: Networking Fundamentals	Planned Hours: 48
Mode of Instruction (please check all that apply): <input checked="" type="checkbox"/> Classroom <input checked="" type="checkbox"/> Lab <input type="checkbox"/> On-line <input type="checkbox"/> Self-study Provided by: WTIA WIAC	
Description of element/course: Describe network fundamentals and build simple LANs Establish Internet connectivity Manage network device security Expand small to medium sized networks with WAN connectivity Describe IPv6 basics	

Element/course: Introduction to Network Security	Planned Hours: 52
Mode of Instruction (please check all that apply): <input checked="" type="checkbox"/> Classroom <input checked="" type="checkbox"/> Lab <input type="checkbox"/> On-line <input type="checkbox"/> Self-study Provided by: WTIA WIAC	
Description of element/course: Describe common network security concepts Secure routing and switching infrastructure Deploy basic authentication, authorization and accounting services Deploy basic firewalling services Deploy basic site-to-site and remote access VPN services Describe the use of more advanced security services such as intrusion protection, content security and identity management	

Element/course: Implementing Secure Access Solutions	Planned Hours: 52
Mode of Instruction (please check all that apply): <input checked="" type="checkbox"/> Classroom <input checked="" type="checkbox"/> Lab <input type="checkbox"/> On-line <input type="checkbox"/> Self-study Provided by: WTIA WIAC	
Description of element/course: Understand Identity Services Engine architecture and access control capabilities. Understand 802.1X architecture, implementation and operation Understand commonly implemented Extensible Authentication Protocols (EAP) Implement Public-Key Infrastructure with ISE Understand the implement Internal and External authentication databases Implement MAC Authentication Bypass Implement identity based authorization policies Implement Web Authentication and Guest Access Implement ISE Posture service Implement ISE Profiling Understand Bring Your Own Device (BYOD) with ISE	

<b>Element/course:</b> Implementing Edge Network Security Solutions	<b>Planned Hours:</b> 52
<b>Mode of Instruction (please check all that apply):</b> <input checked="" type="checkbox"/> Classroom <input checked="" type="checkbox"/> Lab <input type="checkbox"/> On-line <input type="checkbox"/> Self-study Provided by: WTIA WIAC	
<b>Description of element/course:</b> Understanding and implementing modular Network Security Architectures Deploy Infrastructure management and control plane security controls Configuring layer 2 and layer 3 data plane security controls Implement and maintain ASA Network Address Translations (NAT) Implement and maintain IOS Software NAT Designing and deploying Threat Defense solutions on an ASA utilizing access policy and application and identity based inspection Implementing Botnet Traffic Filters Deploying IOS Zone-Based Policy Firewalls (ZBFW). Configure and verify IOS ZBFW Application Inspection Policy	

<b>Element/course:</b> Implementing Secure Mobility Solutions	<b>Planned Hours:</b> 52
<b>Mode of Instruction (please check all that apply):</b> <input checked="" type="checkbox"/> Classroom <input checked="" type="checkbox"/> Lab <input type="checkbox"/> On-line <input type="checkbox"/> Self-study Provided by: WTIA WIAC	
<b>Description of element/course:</b> Describe the various VPN technologies and deployments as well as the cryptographic algorithms and protocols that provide VPN security Implement and maintain site-to-site VPN solutions Implement and maintain FlexVPN in point-to-point, hub-and-spoke, and spoke-to-spoke IPsec VPNs Implement and maintain clientless SSL VPNs Implement and maintain AnyConnect SSL and IPsec VPNs Implement and maintain endpoint security and dynamic access policies (DAP)	

<b>Element/course:</b> Implementing Threat Control Solutions	<b>Planned Hours:</b> 52
<b>Mode of Instruction (please check all that apply):</b> <input checked="" type="checkbox"/> Classroom <input checked="" type="checkbox"/> Lab <input type="checkbox"/> On-line <input type="checkbox"/> Self-study Provided by: WTIA WIAC	
<b>Description of element/course:</b> Understand ASA Next-Generation Firewall (NGFW) Deploy Web Security appliance to mitigate malware Configure Web Security appliance for acceptable use controls Configure Cloud Web Security Connectors Describe Email Security Solutions Configure Email Appliance Incoming and Outgoing Policies Describe IPS Threat Controls Configure and Implement IPS Sensors into a Network.	

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Element/course: Understanding Security Best Practices and Concepts	Planned Hours: 52
Mode of Instruction (please check all that apply): <input checked="" type="checkbox"/> Classroom <input checked="" type="checkbox"/> Lab <input type="checkbox"/> On-line <input type="checkbox"/> Self-study Provided by: WTIA WIAC	
Description of element/course: Access Controls Security Operations and Administration Risk Identification, Monitoring, and Analysis Incident Response and Recovery Cryptography Networks and Communications Security Systems and Application Security	

Element/course: Professional Development	Planned Hours: 12
Mode of Instruction (please check all that apply): <input checked="" type="checkbox"/> Classroom <input type="checkbox"/> Lab <input type="checkbox"/> On-line <input type="checkbox"/> Self-study Provided by: WTIA WIAC	
Description of element/course: Soft Skills Training Career Planning Understanding the IT Business Environment	

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## Journey Level Wage Rate

From which apprentices' wages rates are computed

TO: Washington State Apprenticeship & Training Council

From WTIA WIAC (Program 1982)

(NAME OF STANDARDS)

Occupations	County(s)	Journey Level Wage Rate	Effective Date:
Network Security Administrator	All Geographic Regions Covered by WTIA WIAC Standards of Apprenticeship	65,000 Annually	April 21,2016

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