# CCNAv7 Introduction to Networks

ITN Practice Skills Assessment – Packet Tracer

###### High Level Design:

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| **Purpose:** | The purpose of this Cisco Packet Tracer Practice Skills Based Assessment (PTSA) is to support student success by providing additional student practice prior to taking the end of course hands-on Skills-Based Assessment (SBA). |
| **Design Approach:** | This PTSA is designed to provide the student with practice prior to taking the course final SBA. This PTSA is not a substitute for the SBA. Certain “hands-on” skills can only be assessed by configuring real equipment. However, this PTSA may indicate to the student the skills that may need more practice. Although the claims and component skills are summative, this PTSBA is a formative exam. Scoring rules and feedback are designed to inform the student of strengths and weaknesses so that the student can more effectively prepare for the SBA. |
| **Software Version(s):** | PT v7.3.0 and Marvel v2.06 |
| **Claims/Component Skills:** | The following list of claims and component skills are based on the current final exam table of specifications (TOS).   |  |  |  |  | | --- | --- | --- | --- | | **Proficiency** | **Description** | **Score Component** | **% Points** | | **11.0** | **Calculate an IPv4 subnetting scheme to efficiently segment your network.** | **PC: IP Addressing design** | **20** | | 11.7 | Given a set of requirements for subnetting, implement an IPv4 addressing scheme. |  |  | | 2.7 | Configure a host device with an IP address. | CO: IPv4 LAN 1 Subnet Mask Calculation and Configuration | 5 | | 2.7 | Configure a host device with an IP address. | CO: IPv4 LAN 2 Subnet Mask Calculation and Configuration | 5 | | 11.7 | Given a set of requirements for subnetting, implement an IPv4 addressing scheme. | CO: LAN 1 IPv4 Host Addressing Design and Implementation | 5 | | 11.7 | Given a set of requirements for subnetting, implement an IPv4 addressing scheme. | CO: LAN 2 IPv4 Host Addressing Design and Implementation | 5 | | 2.7 | Configure a host device with an IP address. |  |  | |  |  |  |  | | **12.0** | **Implement an IPv6 addressing scheme.** | **PC: IPv6 Host Address Configuration** | **8** | | 12.9 | Implement an IPv6 addressing scheme. | CO: LAN 1 IPV6 Host Address Configuration | 4 | | 12.9 | Implement an IPv6 addressing scheme. | CO: LAN 2 IPV6 Host Address Configuration | 4 | | **10.0** | **Implement initial settings on a router and end devices.** | **PC: Router interface configuration and addressing** | **26** | | 10.2 | Configure two active interfaces on a Cisco IOS router. | CO: Router Interface Activation | 4 | |  |  | CO: Router Interface G0/0 IPv4 Addressing | 5 | |  |  | CO: Router Interface G0/1 IPv4 Addressing | 5 | | 12.8 | Implement a subnetted IPv6 addressing scheme. | CO: Router Interface G0/0 IPv6 Addressing | 6 | |  |  | CO: Router Interface G0/1 IPv6 Addressing | 6 | | **10.0** | **Implement initial settings on a router and end devices.** | **PC: Host Default gateway configuration** | **10** | | 10.3 | Configure devices to use the default gateway. | CO: LAN 1 Hosts Default Gateway Configuration | 5 | |  |  | CO: LAN 2 Hosts Default Gateway Configuration | 5 | | **2.7** | **Configure a host device with an IP address.** | **PC: Switch management interface configuration** | **6** | |  |  | CO: Switch Management Interface Configuration | 6 | | **2.0** | **Implement initial settings including passwords, IP addressing, and default gateway parameters on a network switch and end devices.** | **PC: Initial device configuration** | **15** | | 2.4 | Configure a Cisco IOS device using CLI. | CO: Basic Router Configuration |  | | 2.4 | Configure a Cisco IOS device using CLI. | CO: Secure Communication Lines | 5 | | **16.0** | **Configure switches and routers with device hardening features to enhance security.** | **PC: device hardening** | **15** | | 16.4 | Configure network devices with device hardening features to mitigate security threats. | CO: Enhanced Router Password Security | 5 | |  |  | CO: Router SSH configuration | 10 | |  |  |  | **100** | |
| **PT Assessment Objectives:** | Please see the table above. |
| **Topologies:** | The following topologies represent the beginning state and the correct ending state for the PTSBA.  The student will configure LAN Switch 2 and Router0 through a console connection only. PC1, PC2, PC3, and the TFTP server will all be accessible for IP addressing and verification. The router and all hosts except for LAN 2 Switch require the configuration of both IPv4 and IPv6 addresses.  LAN Switch 1 will not be accessible for configuration in the final activity  **Generic Initial Topology:**  **Generic Answer Topology:** |
| **Attributes:** | The PTSA is available through the Networking Academy CCNAv7 Introduction to Networks Course and is activated in exactly the same manner as all other course exams.   |  |  | | --- | --- | | **Attribute** | **Standard Value** | | Exam Title | ITNv7 Final Packet Tracer Skills Assessment (PTSA) | | Form | Form A | | Max Activation Window | 90 days | | Max Number of Attempts | 40 | | Default Duration | 2 hours | | Max Duration | 10 hours | | Minimum duration | 1 hour | |