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Download tutorials in PDF files - Address Assignment Tutorial IP & Network! Download other tutorials for addressing tutorials. We will do everything to help you! CCNA (Cisco Certified Network Associate) is a popular certification for computer network engineers provided by a company named Cisco Systems. CCNA stands for Cisco Certified Network Associate. CCNA certificate covers a wide range of network concepts and ccna basics, allowing applicants to study the basics of CCNA and prepare for the latest network technology they are likely to work on. Some of the ccna basics covered under CCNA certification include: OSI IP models, WLAN addresses, and VLAN network security and management (including ACL), routers/ routing protocols (EIGRP, OSPF and RIP). When the certification expires, the certificate holder must re-examine the CCNA certificate. Why ccna certification? Use, configure, and troubleshoot networks that switch and cycle in the medium term. It also monitors and uses a connection through a remote site using WAN, it teaches the applicant how to create a point-to-point network, it teaches about how to meet the needs of the user by defining the network topology, it tells you how to route the protocol to the network connection, it explains how to establish a network address, it explains how to establish a connection to a remote network. Certificate holders can install, configure and use LAN and WAN services for ccna certificates, small networks are necessary for other Cisco certifications such as CCNA Security, CCNA Wireless, CCNA Voice, etc. Cisco CCNA offers five levels of network certification: Secondary, Expert and Architects Cisco Certified Network Associate (200-301 CCNA), a new certification program that covers a wide range of basics for IT professionals, as we mentioned earlier in ccna, this is the validity for any CCNA certificate for three years. The exam code is designed for the duration and number of questions in the exam fee 200-301 CCNA, a network technician with 120 minutes experience. Question 50-60$ 300 (for different country prices may vary) In addition to this certification, the new certification courses registered by CCNA include - CCNA Cloud CCNA, CCNA Collaboration, Switching and Routing CCNA Security CCNA Provider, CCNA DataCenter CCNA Industry CCNA Voice CCNA Wireless. CCNA certified applicants can also prepare for exams with the help of ccna boot camp, so that the full CCNA course is completed with a completed exam, one must be detailed of these topics:

TCP/IP and OSI subnetting versions, IPv6, NAT (network address translation) and wireless access. CcNA network courses also include network access, IP connection, basic IP services, network security, automation and programming. The new changes in the current CCNA exam include a deeper understanding of IPv6 CCNP subjects such as HSRP, DTP, EtherChannel, advanced troubleshooting techniques, network design with supernetting eligibility criteria and subnetting for certification, not necessarily a degree, however, required by some good employers to have a basic CCNA level of programming, knowledge, local internet, local network, internet network consisting of a computer network connected within the area. Such as offices, housing, laboratories, etc. This area network includes WAN, WLAN, LAN, SAN and more. Among these wan, LAN and WLAN are the most popular. Understanding the need to network a network? A network refers to at least two independent devices or computers linked to resource sharing (such as printers and CDs). For example, a computer on a network might be linked through a telephone line, cable, satellite. radio waves or infrared beams. Two very common types of networks: local area network (LAN), wide area network (WAN), learn the difference between LAN and WAN from the OSI reference model, layer 3, such as the network layer, participate in the network. This layer is responsible for forwarding routing packets through intermediate routers, recognition and message forwarding, local host domains to transport layers (Layer 4), etc. If two devices or computers are connected to the same link, there is no need for a network layer. Learn more about the types of computer networks internet-enabled devices used on the network for Internet connections. Some The most common device used to create the Internet is NIC: A network interface card or NIC is a printed circuit board installed in a workstation. Although NIC operates at the physical layer of the OSI version, it is considered a data link layer device. It also controls the transmission of data to the wire hub: the hub helps to extend the length of the network cable system by extending the signal and then sending the signal again. They are a multi-port repeater in general and are not worried about data at all. The hub connects the workstation and sends it to all connected workstations. Bridges: When networks get larger, they are often difficult to manage. To manage these growing networks, they are often divided into small LANs, these small LANS are connected together through bridges. This not only reduces network traffic drain, but also monitors packets as they move between sections, it tracks MAC addresses associated with ports. Switches: Switches are used in the option to weld, and it becomes a common way to connect the network as it is faster and smarter than the bridge. It can send data to a specific workstation. The switch allows each workstation to send data over the network independently of other workstations. Router: The aim of using the router is to take the data along the most efficient and economical route to the destination device. They work at Network Layer 3, which means that they communicate through ip addresses and non-physical addresses (MAC). Routers can link different types of networks, such as Ethernet, FDDI, and Ring Brouters tokens: a combination of both the router and the Brouter bridge, serves as a filter that allows some data to be in the local network and redirect unknown data to another network. Modem: A device that converts a digital signal generated by a computer into an analog signal traveling through a telephone line. Understanding TCP /IP layersTCP / IP stands for transmission control protocols / Internet protocols, which determines how computers should connect to the Internet and how data is transmitted between each other. In addition, for reassembly, packets when they reach the IP (Internet Protocol): are responsible for managing, sending and receiving data packets over the Internet. Below shows the TCP/IP format connected to the OSI layer. To understand the TCP/IP Internet layer, we use a simple example. When we type something in the address bar, our request is processed to the server. The server will reply to us with a request. This communication on the Internet is possible because tcp/ip protocol messages are sent and received in small packages. The Internet layer in the TCP/IP reference format is responsible for transferring data between the source computer and the destination. This layer consists of two activities that send data to the network interface layer, routing the data to the correct destination, so how does this happen? The Internet layer collects data into data packets called IP datagrams, consisting of the source and destination IP addresses. Beside this, the IP datagram header field contains information such as version, length, header, type of service, datagram length, time to live, and so on. In the network layer, you can observe network protocols such as ARP, IP, ICMP, IGMP and so on. Datagrams are transmitted over the network using these protocols. Each of them resembles some functions, such as Internet Protocol (IP), responsible for identifying IP addresses, routing, fragmentation, and reassembled packets. Similarly, you have an ICMP protocol responsible for diagnosing and reporting errors due to packet delivery. IP failed. For managing multicast groups, IP protocols, IGMP is responsible. their IP using the network. The image below shows the format of the IP address, understanding the TCP/IP transport layer, the transport layer, also known as the host transport layer to the host. It is responsible for providing application communication services to sessions and datagram communication services. The main protocols of the Transport layer are User Datagram (UDP) protocols and transmission control protocols (TCP). It also recovers lost packets during transmission. Sending packets over TCP is more secure and guaranteed. Other protocols in the same category are FTP, HTTP, SMTP, POP, IMAP, and other UDP are used when the amount of data to be transferred is small. UDP packet delivery is not guaranteed, use in VoIP, video conferencing, ping cayenne, etc. Helps to isolate traffic and improve internet speed. Network segmentation can be performed in the following ways by using the DMZ (demilitarised zone) and the gateway between different secure networks or systems. Using server and domain isolation using Internet Protocol Security (IPsec) by using segmentation and storage-based filtering using techniques such as obscure and LUN (Logical Unit Number) encryption. To detect and respond to unknown intrusions in a separate network, network problems. - Provides a quick way to extract compromised devices from the rest of your network in case of intrusion. Reducing congestion - by segmenting the LAN segment, the number of hosts per network can be reduced, the network expands - can increase the router to expand the network, enabling additional hosting on the LAN. Segmentation follows factors such as team, project, function or application, regardless of the physical location of the user or device. The groups of connected devices in the VLAN act as if they are in their own independent network, even if they share infrastructure with other VLANs. SubnettingSubnets are more concerned about IP address subnetting, primarily hardware-based, unlike VLAN, which is software that uses subnets, namely a group of IP addresses. If they are in the same subnet, they will not be available. In this CCNA tutorial, we will learn some things to consider while monitoring the appropriate network users to access secure network groups, ACL or access lists should be properly configured, the access monitoring log, whatever compromise, the secure network section should be checked packets. Monitor inbound and outbound traffic security policies based on user or application credentials to determine which data is accessible and not dependent on ports, IP addresses and protocols, do not allow cardholder data to be removed from other network segments outside the PCI DSS Packet scope. The process of sending data from one host to another depends on whether the sent and received host is in the same domain. Packets can be shipped two ways that packets are defined for a remote system on another network. But if the send and receive device is connected to another broadcast domain, it is necessary to use an IP address and router. If host A is not mapped, an ARP (broadcast in THE LAN) request for the MAC address for the IP address, host B will receive the request and reply with an ARP response that specifies the MAC address, routing the Intrasegment packet if the packet is defined for the system on the same local network. This means that if the destination node is on the same network part of the send node, the destination node will not be available. The submitted node identifies the packet address in the following ways: The node number of the send node is placed in the Source Address field. For example, if Host A wants to send packets to Host B, it will send packets this way. Default gateway (default gateway router) To send a packet to the host router, A needs to know the Mac address of the router for Host A, then send an ARP request to request the Mac address of the router, this packet is broadcast on the local network. The default gateway router receives an ARP request for the MAC address, it responds back with the Mac address of the default router to host A, now host A knows the MAC address of the router. The following source IP information of the destination IP data of the mac address information of the destination Mac address, when the router receives the packet, it will end the ARP request from host A Now Host B will receive an ARP request from the default gateway router for host B mac address. Now the default router sends packets to packet routing. Host B Intersegment, where two nodes are located on different network sections, packet routing occurs in the following manner. In the first packet in the MAC header, paste the destination number 20 from the router and The source field itself 01 for the IPX header, enter the destination number 02, the source field is AA and 01, while in the second packet, the MAC header places the destination number as 02 and the source is 21 from the router. AA and 01 Wireless Local Area NetworksWireless technology first introduced in the 90s, used to connect the device to the LAN, technically, it is called the 802.11 WLAN protocol, or the local wireless network, NetworksWLAN is to communicate wireless networks in short distances using radio or infrared signals. Any Wi-Fi components connected to the WLAN are considered stations and divided into one of two categories. Access point (AP): AP sends and receives radio frequency signals with devices that can receive transmitted signals. Typically, these devices are routers. Customers: It may contain a wide range of devices such as workstations, laptops, phones, IP, desktop computers. All work stations that can be connected to each other are called BSS (basic service packs), examples of WLAN include WLAN adapters, access points (AP), WLAN station adapters, WLAN switches, routers, server cables, security connectors, and so on. It is used in Ethernet LAN WLAN using CSMA/CA technology (the carrier feels multiple access by avoiding collisions). To avoid collisions, WLAN uses a different frame format than using a wired Ethernet LAN. The standard WLAN radio frequency transmission, local ITU-R standard, FCC wireless 802.11 standard and wi-fi protocol, Wi-Fi partners to see this one-to-one, radio frequency transmission ranges from the frequency used by the cell phone to the AM radio band. The following factors can influence radio frequency transmission absorption - when radio waves reflect objects - when radio waves hit uneven surfaces, scattered - when radio waves absorbed by WLAN standard objects to establish WLAN standards, and many organizational certifications have moved forward. The organization has appointed regulators to regulate the use of RF bands, approvals are taken from all regulators of WLAN services before they are used or implemented new gear, adjustments and frequencies. These regulators include the Federal Communications Commission (FCC) for Europe, the United States. While setting standards for these wireless technologies, you have another power. These include IEEE (Institute of Electrical and Electronic Engineers), ITU (International Telecommunications Union), ITU-R Local FCC WirelessITU (International Telecommunications Union). Co-ordinate spectrum allocation and regulation among all regulatory agencies in each country. No wireless device license is required on unlicensed frequency bands. For example, the 2.4 gigahertz band is used for wireless LAN, but also used by Bluetooth devices, microwave ovens and portable phones. The IEEE 802.11 WLAN WiFi protocol and 802.11 Standard 802.11 WLAN use a media access control protocol called CSMA/CA (Carrier Multiple Sense Access with Collision Avoidance). It includes network standards that cover the physical layer requirements of technology from Ethernet to wireless IEEE 802.11. Similarly, we can expand to 802.11b used with wireless LANS and provide 11 Mbps transmission (with back to 5.5, 2 and 1-Mbps) in the 2.4 GHz bar using only DSSS (direct sequence spread spectrum). The table below shows different Wi-Fi protocols and data rates. Certification includes three versions of IEEE 802.11 RF technology, including the introduction of pre-pending IEEE drafts, such as security management technology. IP eavesdropping session hijacking DOS (denial of service) attacks in this CCNA tutorial, we will learn about the technology used to secure WLAN from vulnerabilities. WEP (wired equivalent privacy): In response to security threats, WEP is used. WPA/WPA2 (WI-FI Protected Access): By introducing TKIP (temporary key integrity protocol) on Wi-Fi, security standards will increase again, TKIP has been renewed on The basics make it impossible to steal. In addition, data integrity has been improved through the use of stronger hash mechanisms. Wireless Intrusion Prevention / Intrusion Detection System: It is a device that monitors radio frequencies for the presence of unauthorized access points. There are three deployment models for WIPS, AP (access points), so WIPS and network connection functions can be performed at all times when WIPS is deployed through a specific sensor instead of using WLANWhile-based APs. In this CCNA tutorial for beginners, we will learn how WLAN can be used in two ad hoc modes: in this mode, do not need to use an access point and can connect directly. This setting is suitable for small offices (or home offices), the only drawback is weak security in such modes. Infrastructure mode: In this mode The client can connect through an access point. Infrastructure mode is categorized into two modes: Basic Services Suite (BSS): BSS provides a basic building block of 802.11 BSS wireless LAN, consisting of a group of computers and one AP (access point) which links to the BSS wired LAN, Every BSS has a code called BSSID (as the Mac address of the access point that provides BSS), the Additional Services Suite (ESS): a set of BSS connected ESS allows users, especially mobile users, to roam anywhere within multiple AP areas (access points). Each ESS has a code called SSID WLAN Topologies BSA: it is called the physical area of RF coverage (radio frequency) supplied by the access point in the BSS, depending on the RF generated by the changes generated by the power output, the access point, the antenna type, and the physical environment affecting the RF, the remote device can not communicate directly, they can only communicate through the access point. The AP began sending beacons that advertise bss characteristics, such as channel adjustment formats, and protocols that support ESA: If a single cell fails to provide sufficient coverage, it can increase any cell count to expand coverage. This, called ESA, recommends that remote users roam without losing 10 to 15 percent RF connections for wireless networks, suggesting a 15 to 20 percent overlap. Access Point Configuration: Wireless AP Points can be configured through a command-line interface or through a browser GUI. The features of the access point usually allow for parameter adjustment, such as the radio to enable the frequency to be offered, and the IEEE standard to be used in RF; Step 2) Use a wireless that has only one access point and a single client without wireless security step 3) Verify that the wireless client receives the DHCP IP address, and then it can connect to the local wired default router and browse the external Internet. Step 4) Secure wireless networks with WPA/WPA2 TroubleshootingWLAN may experience some configuration issues, such as configuring incompatible security methods. Divide the environment into a wired network with a wireless network. Further, by dividing the wireless network into configuration with RF issues, check for the proper functionality of existing wired infrastructure and related services. Find both access points and wireless clients together. Start the wireless client in open authentication always and establish a connection to check if there is a metal obstruction if then, then change the location of the local network access point, the local network connection network is. Using LAN, you can connect to a network-enabled printer that connects to a network of wi-fi devices. For network connections in different geographic areas, you can use WAN (wide area network) in this CCNA tutorial for beginners, we will see how computers on different networks communicate with each other. Introduction to routerA is an electronic device used to connect a network on a LAN, it connects at least two networks and forwards packets among them. According to the information in the packet header and routing table, the router is connected to the network. It is the main device necessary for the operation of the Internet and other complex networks. The router is divided into two static: the administrator sets up and configures the routing table manually to specify each path. Dynamic: Routes can be searched automatically. They check data from other routers depending on where it makes packet decisions by packets on how to transmit data over the network. Binary Base Builder above Each device in the network is identified with a unique IP address. We will see this in the later sections, first of all, take a look at some basic binary figures lessons. Binary numbers consist of numbers 1,1,0,0,1,1, but how to use this number to route and communicate between networks. If the bit is 1, it is considered active, and if 0 shows how inactive the binary calculation is, how is it? You will be familiar with decimal places such as 10, 100, 1000, 10,000 and so on, which is nothing but power, only 10 binary values work in the same way, but instead of base 10, it uses the base as 2, for example, 20, 21, 22, 23, ...26, the value of the bit from the left is up to the right. For this you can get values such as 1,2,4,....64, see the table below. Now, because you are familiar with the value of each bit in bytes. The next step is to understand that these numbers are converted to binary, such as 01101110, and the other, each number 1 in binary represents the power of two, and each 0 represents zero in the table above. Therefore, for binary values in table 0110110, we will add numbers 64 + 32 + 8 + 4 + 2 to get the number 110. Each octet is converted to decimal and separated by dots (dots) IP addresses consisting of two parts, a network ID - a network ID that specifies the network that the computer uses host ID - a section that specifies the computer on that network bit. 32 bits divided into four octets (1 octet = 8 bits) The values in each octet range from 0 to 255 decimal places. The most suitable octet has a value of 20 and gradually increases to 27, as shown below. Let's see another example, for example, we have an IP address of 10.10.16.1, and then first the address is divided into the following octet. Now if you convert to binary format it will look like this, 00001010.00001010.00010000.0000001. IPIP address classes are divided into different categories: Class A 0-127 communication class type for Internet communication, Class B 128-191 for Internet communication, class C 192-223 for Class D Internet communication. Reserved for Multicasting Class 240-254, reserved for research and experimentation to communicate over the Internet, the private range of IP addresses is as follows: Class Type A 10.0.0.0 – 10.255.255.255 Class B 172.16.0.0 - 172.31.. 25 5.255 Class C 192-223 - 192.168.255.255 Subnet and Subnet Mask for any organization, you may need a small network of dozens of standalone machines. For that, we need to set up a network with more than 1,000 hosts in multiple buildings. The size of the network affects the network class that you use with the network number that you receive, the IP address scheme that you use for network performance may be negatively affected under the mass traffic load due to collisions and resend. For subnet masks, it can be a useful strategy. Subnet masks help you determine where the end point in the subnet is located. Different classes have subnet masks starting class A - 255.0.0 Class B-255.255.0.0 Class C- 255.255.255.0 Router security, help secure your router from unauthorized access, tampering and eavesdropping. For this deployment technology, such as Branch Threat Defense VPN with a highly secure connection, Branch Threat Defense Route user traffic: route a user's traffic directly to the Internet and roll back enterprise traffic to the head office. This way, customer traffic will not pose a threat to your organization's environment. Public cloud access: Only certain types of traffic can use local Internet routes. Various security software such as firewalls can provide you with unauthorized network access protection. Full direct Internet access: All traffic is sent to the Internet using a local route. Ensure that the enterprise level is protected from enterprise-grade threats. VPN SolutionVPN solutions protect different types of WAN designs (public, private, wired, wireless, etc.) and the information they carry. Data can be divided into two types of data, the rest of the data transmitted through data is secure through the following technologies. Encryption (source authentication, hiding topology, etc.), Compliance standards (HIPAA, PCI DSS, Sarbanes-Oxley) Compliance Summary: CCNA Cisco Certified Network Associate is a computer network that connects computers within limited space, WAN, LAN, and WLAN is the most popular Internet local network based on the OSI layer 3 reference model, such as network layer participation in network layer 3, is responsible for forwarding routing packets through intermediate routers, remembering and forwarding local domain messages to transport some layers (4), etc. Common devices used for networking include NIC Hubs Bridges Switchs Routers. The TCP/IP reference format in the Internet layer does two things to send data to the network interface layer, routing the data to the correct destination, packet delivery over TCP is more secure and the UDP guarantee is used when the amount of data to be transferred is small. Packet delivery is not guaranteed. VLAN Segmentation Subnetting A packet can be delivered two ways, packets defined for a remote system on another network, packets defined for systems on the same local network, WLAN is a wireless network communication in short distances, using radio or infrared signals, any components connected to WLAN are considered stations and fall into two types of WLAN using CSMA/CA technology used to secure WLAN WEP (wired equivalent privacy) WPA/WPA2 (WI-FI Protected Access). Wireless intrusion prevention system /WLAN intrusion detection system can be performed in two ways. Routers connect to two or more networks and forward packets between those networks are categorized into two parts: IP addresses are the main Internet protocols responsible for routing in packets in networks that switch packets. A routing is a route search process that data can pass from source to destination. Routing is made by a device called a router, which is a network layer device, 2) what is the purpose of the data link? The task of the data link layer is to verify the message is sent to the appropriate device. Another function of this layer is framing 3)What are the major advantages of using the switch? When the switch receives a signal, this process can access and read the destination address, after which the frame is forwarded to the appropriate port. This is a very effective way to send data rather than broadcast on all ports. 4) When network congestion occurs? Network congestion occurs when too many users try to use the same bandwidth. This is especially true on large networks that do not resort to network segmentation.5) The window refers to the number of segments that are allowed to be sent from the source to the destination before returning acceptance. That's not true. The bridge really is the use of large networks and filters without changing the size of the network. The LLC sublayer stands for logical link control. It can provide complementary services to application developers. One option is to provide flow control to the network layer using the stop/start code LLC can also provide error correction 9)Rip differs from irp or not RIP relies on the number of jumps to determine the best route to the network. On the other hand, IGRP takes into account several factors before deciding the best route to use, such as bandwidth, reliability, MTU and jumping number 10). Storage startup configuration file - DRAM stores configuration files in progress - Flash Memory - Cisco IOS Storage 11)What is bootp or not BootP is the protocol used to boot a workstation that does not have a disk connected to the network. It's short for boot programs. The diskless workstation also uses BootP to identify its own IP address, including the IP address of the PC server 12)What is the function of the application layer in the network? On the other hand, privilege mode has all the options available for user mode and so on. You can use this mode to perform configurations on the router, including testing and debugging 14). This is an Ethernet that uses a fiber optic cable as the main transmission medium 100Mbps stands 100Mbps, which is the speed of data 15). In the case of half-duplex, the device cannot be obtained while transmitting power, and vice versa. It means the maximum packet size can be exported to the data line without the need to disassemble 17) how to cut-through lan switch? To switch the LAN through, is Once the router receives the data frame, it will export again immediately and forward it to the next network section after reading the destination address. 18) What is latency? Latency is the number of delays that measure the point at which a network device receives a data frame to a time that is re-submitted to another network. 19) Use rip, what is the limit When it comes to the number of hops? The maximum limit is 15 hops. Anything higher than 15 indicates that the network is inaccessible 20), what is the frame relay relay or not, frame relay is a WAN protocol that provides connection-oriented communication by creating and maintaining virtual circuits. With high-performance ratings and running data links and physical layers 21), how do you configure cisco routers to route IPX? The first thing to do is enable IPX routing using the IPX routing command. The additional access list uses the source and destination IP addresses. 23) Describes the benefits of VLANs allowing them to create collision domains based on groups other than physical locations. Using VLANs, it is possible to build a network with different methods, such as according to functions, hardware types, protocols and so on. This is a big advantage compared to conventional LANs where collision domains are always linked to physical positions. Each subnet is assigned additional parameters or identifiers to identify the subnet number. 25) What are the advantages of layer model in the network industry? Layered network has several advantages. Allows administrators to make changes in a single layer without the need to make changes to other layers. Expertise encourages the network industry to progress faster. 26) Why is the UDP lease pleasing compared to TCP because UDP is not reliable and unchecked? It cannot create a virtual circuit and acceptance. 27) What are some standards supported by the offer class? Presentation layers support multiple standards that ensure that data is presented correctly. These include PICT, TIFF and JPEG for MPEG MIDI graphics and QuickTime for video/audio 28) The easiest way to configure a remote router is: In case you want to configure the router remotely, the most convenient is: However, the router must be connected to a WAN or LAN through one of the interfaces. 29) What does the protocol display or not - the routing protocol configured on the router - the address defined in each interface - how the encapsulation is configured in each interface 30), how do you display the IP address? Three possible ways: - Using decimal points For example: 192.168.0.1 - By using binary, for example: 10000010.00111011.01110010.01110011 - using hexadecimal For example: 82 1E 10 A1 31), how do you go to privilege mode, how do you switch back to user mode? To access privileged mode, you enter a command. Enabled on the prompt To return to user mode, enter the command. Disabled 32) What is HDLC? Stands for high-level data link control protocol. It is cisco's proprietary protocol, it is the default encapsulation implemented within cisco router 33)How the Internet works was built. In particular, a network administrator assigns a logical address to all networks connected to the router. 34) What is bandwidth? Bandwidth refers to the ability to transmit media. It is a volume measurement that the transmitter can handle and how it works in Kbps 35). Hold down prevents the normal update message from reusing the linked by removing it from the update message. Use the triggered update to reset the stop timer 36)What is the packet? A packet is the result of wrapping data. This is the data that is wrapped under the different protocols of the OSI layer, the packet is also called datagram 37), what part is it? Segment is a logical unit at the transport layer 38) provides some benefits of lan's switching - allowing full duplex transmission and reception - media rate adjustment - 39) What is a toxic path? The toxic path is the process of inserting table 16 entries to the path, making it inaccessible. This technique is used to prevent problems caused by inconsistent updates in route 40.) How do you find the correct host in the subnet? The best way to go about this is to use equation 256 subnet masks. A host that is considered valid is a host that can be found between subnets 41)what is dlci? DLCI or Data Link Connection Identifiers are typically determined by the relay frame provider to uniquely identify each virtual circuit that exists on the network. 42) Briefly describe the conversion process in the data wrapping from the transmitter reference point. These packets are converted to frames before they are sent through to the network interface. Finally, the frame will be converted to bits before sending real data 43) what types of passwords are used to secure cisco routers? Actually, there are five types of passwords available. These enable virtual terminal secrets, consoles and accessories 44). Network segmentation helps alleviate network traffic and ensures always-high bandwidth for all users. This translates to better performance, especially for growing networks. The interface is a fixed configuration that refers to the router port 46)Distinguishing the logical physical topology, the logical topology refers to the signal path through the physical topology of the physical topology as the actual layout of the network media 47)What causes the trigger update to reset the router hold-down timer? สิ่งนี้อาจเกิดขึ้นเมื่อตัวจับเวลาการหยุดหมดอายุแล้วหรือเมื่อเราเตอร์ได้รับงานการประมวลผลที่บังเอิญเป็นสัดส่วนกับจำนวนลิงก์ในอินเทอร์เน็ต 48) ในการกำหนดค่าเราเตอร์ต้องใช้คำสั่งใดหากคุณต้องการลบข้อมูลการกำหนดค่าที่เก็บไว้ใน NVRAM ก. ลบรัน-กำหนดค่า B ลบการเริ่มต้น-กำหนดค่า C ลบ NVRAM D. ลบคำตอบที่ถูกต้อง NVRAM: B ลบการเริ่มต้น config 49) หมายถึงคำสั่งที่แสดงคำสั่งใดจะต้องใช้ต่อไปบนเราเตอร์สาขาก่อนที่จะส่งข้อมูลไปยังเราเตอร์? Hostname: Branch Hostname: Remote PH# 123-6000, 123-6001 PH# 123-8000, 123-8001 SPID1: 32055512360001 SPID1: 32055512380001 SPID2: 32055512360002 SPID2: 32055512380002 ISDN switch-type basic ni username Remote password cisco interface bri0 IP address 10.1.1.1 255.255.255.0 encapsulation PPP PPP authentication chap ISDN spid1 41055512360001 ISDN spid2 41055512360002 dialer map IP 10.1.1.2 name Remote 1238001 dialer-list 1 protocol IP permit Correct Answer: (config-if)# dialer-group 1 50) When configuring a router utilizing both physical and logical interfaces, what factor must be considered in determining the OSPF router ID? ที่อยู่ IP สูงสุดของอินเทอร์เฟซทางกายภาพใด ๆ ที่อยู่ IP ต่ำสุดของอินเทอร์เฟซแบบลอจิคัลใด ๆ ที่อยู่ IP กลางของอินเทอร์เฟซแบบลอจิคัลใด ๆ ที่อยู่ IP ต่ำสุดของอินเทอร์เฟซทางกายภาพใดๆ ที่อยู่ IP สูงสุดของอินเทอร์เฟซใด ๆ ที่อยู่ IP สูงสุดของอินเทอร์เฟซแบบลอจิคัลใด ๆ ที่อยู่ IP ต่ำสุดของอินเทอร์เฟซใด ๆ คำตอบที่ถูกต้องคือ A. ที่อยู่ IP สูงสุดของอินเทอร์เฟซทางกายภาพใด ๆ 51)สิ่งที่เป็นความแตกต่างระหว่างสวิทช์, ฮับ, และเราเตอร์หรือไม่ Switch Router Hub has a single broadcast domain and a collision domain. What comes in one port is sent to the other, it is a device that filters and forwards packets between the LAN switch section, has a single broadcast domain and multiple collision domains. Supports any packet protocol, such as running data link Layer 2 and Layer 3 Router as a device that transmits data packets according to the network 52) how large the IP address is, the size of the IP address is 32 bit for IPv4 and 128 bit for IPv6 53). The data packet contains the sender's information. There is also a numeric code number that assigns packet and order numbers. When data is sent over a network In short, data packets store data and configure routing for your transferred messages. 54) What is dpcp stand for whether or not DHCP stands for the dynamic host configuration protocol, DHCP will automatically assign the IP address to the assigned workstation client. Bootp is a computer network protocol that applies to deploy IP addresses to network devices from the 56) configuration server, explaining why UDP is rented in comparison to because TCP UDP is sequenced and unreliable. 57) Identify the difference between dynamic IP and static IP address assignment? The range for private IP is Class A: 10.0.0.0 – 10.0.0.255 Class B: 172.16.0.0 – 172.. 0 31.0.0 Class C: 192.168.0.0 – 192.168.0.255 59) How many routers can you access? EIGRP stands for advanced internal gateway routing protocol as a routing protocol designed by Cisco Systems. The EIGRP protocol consists of a maximum load capacity of MTU bandwidth, a maximum of 62). 63) Mention the commands you need if you want to delete or delete the configuration data stored in NVRAM. The difference between TCP and UDP? TCP (Transmission Control Protocol) UDP (User Datagram Protocol) TCP is a connection-oriented protocol. When a connection is lost during file transfer The server will request a lost part. When transferring messages, there is no damage when transferring UDP messages, depending on the disconnected protocol. When you send data, there is no guarantee that your transferred messages will get there without leaking, the message will be delivered in the order in which the message you send may not be in the same order. When one packet ends and one start packet is sent individually and guaranteed to be all if they reach the sample of TCP, including the World Wide Web email file transfer protocol, the sample for UDP is VOIP (Voice Over Internet Protocol), TFTP (Trivial file transfer protocol), 65) explain the difference between the duplex and full? A full duplex means that communication can occur in both directions at the same time, while half the duplex means that communication can occur in one direction at a time. 66) What is the conversion process of encapsulating data? The conversion process of encapsulating data includes one layer. Second and third (application/presentation/session): Alphanumeric input from the user is converted to Data Layer Four (transport): Data is converted to a small part of the fifth layer (network): Data converted to packets or datagrams, and network headers are added to six layers (datalinks): Datagrams or packets are created in the seven layer frames (physical): frames are converted to 67 bits). Path poisoning is a technique to prevent networks from sending packets over the wrong path. 69) Which route will be assigned to a dead or incorrect path in the case of RIP, in the case of RIP table entries, jumping 16 is assigned to a dead or incorrect path, making it inaccessible. Page 3 Last detail: November 11, 2020, the following is a compiled list of CCNA 'Cisco Certified Network Associate' top 80 courses for beginners and professionals. These courses cover concepts such as routing and switching, packet tracker, FHRP, packet tracker, and switching. The best CCNA courses, we now see a list of the best 80 CCNA courses, which will help you become an accredited network professional. This list offers many online CCNA courses, some for free and some paying. The question asked ⚡ can I get a printable certificate? Yes, you will get a printable certificate in several courses. In fact, some course providers will ship hard. 🚺 you need what permissions are required to attend the CCNA course for most courses: basic network knowledge, basic PC operating system navigation skills, the knowledge of any server will be adantage, but not pulses. What happens 💻 if I miss class? All classes are saved and can be replayed later. ✔ what happens if I don't like the CCNA course I bought? Most courses come with a 30-day return policy or a 7-day free trial **?** how do I ask my questions or questions? Most courses have forums that allow you to ask questions that course authors frequently answer. Author.