Range port antara 1.024 – 4.9151 adalah....

Select one:

a.
Well-Known Ports

b.
Static port

c.
Dinamis port

d.
Port biasa

e.
Registered Ports

The range of ports between 1.024 and 4.9151 is known as "Registered Ports."

Registered Ports are a range of ports (also known as socket numbers) that are assigned and registered by the Internet Assigned Numbers Authority (IANA). These ports are used by specific applications or services, and they are commonly used for client-server communication over TCP/IP networks.

Registered Ports range from 1.024 to 49.151. They are reserved for well-known services or protocols that are not assigned to the well-known ports (which range from 0 to 1.023) but still require a standardized port assignment.

So, the correct answer is:

e. Registered Ports

---

m

Proses untuk menentukan kemana sebuah IP paket tertuju ke sebuah alamat diluar jaringan lokal akan dikirim disebut proses.....

Select one:

a.
Routing

b.
Gateway

c.
Routing table

d.
Link state

e.
Subneting

The process of determining where an IP packet should be sent to reach a destination address outside the local network is called "Routing."

Routing involves the selection of the optimal path or route for network traffic to reach its intended destination. It is a fundamental process in computer networking that involves making decisions based on the information contained in routing tables.

While other options listed, such as gateway, routing table, link state, and subnetting, are all relevant to routing in some way, the specific process described in the question is referred to as routing.

So, the correct answer is:

a. Routing

---

m

Keuntungan membangun routing table menggunakan static routing kecuali.....

Select one:

a.
Untuk menentukan route tidak diperlukan perhitungan algoritma yang rumit

b.
Tidak ada pertukaran informasi routing table antar router sehingga bandwidth digunakan seutuhnya untuk pertukaran data

c.
Kerja Prosesor pada router ringan

d.
Pertukaran informasi dapat dilakukan secara periodis

e.
Routing protocol paling reliable (berdasarkan Router Cisco)

The correct answer is:

d. Pertukaran informasi dapat dilakukan secara periodis

The disadvantage of using static routing is that it does not support dynamic updates or automatic exchange of routing information. Unlike dynamic routing protocols, static routing requires manual configuration and does not adapt to network changes automatically. With static routing, the routing table needs to be manually updated whenever there are changes in the network topology or routing requirements.

Therefore, the statement "Pertukaran informasi dapat dilakukan secara periodis" (Periodic exchange of information can be done) is not a valid advantage of building a routing table using static routing.

---

m VLAN bekerja pada layer 2 model OSI yaitu Data-Link Layer

Select one:
True
False

True

VLAN (Virtual Local Area Network) operates at the Data Link Layer (Layer 2) of the OSI model. VLANs are used to logically divide a single physical network into multiple virtual networks, allowing different groups of devices to communicate with

each other as if they were connected to separate physical networks. By operating at the Data Link Layer, VLANs can separate traffic at the Ethernet level, based on the VLAN tags assigned to network frames.

---

m

Untuk mengirim data dengan sempurna TCP memiliki fitur Segmentation and reassembly (SAR) dan Acknowledgements

Select one:
True
False

True

TCP (Transmission Control Protocol) does indeed have the features of Segmentation and Reassembly (SAR) and Acknowledgements.

Segmentation and reassembly refer to the process of breaking the data into smaller segments at the sender's end and reassembling them at the receiver's end. This allows TCP to efficiently handle large amounts of data by dividing it into smaller units for transmission and reassembling it correctly at the destination.

Acknowledgements are a fundamental part of TCP's reliable data delivery mechanism. After receiving a segment, the receiver sends an acknowledgment back to the sender to indicate that the segment was received successfully. If the sender doesn't receive an acknowledgment within a certain timeout period, it retransmits the data segment to ensure reliable delivery.

Both segmentation and reassembly, as well as acknowledgments, are essential features of TCP that contribute to its reliability and ability to ensure the successful transmission of data.

---

m

Untuk berinteraksi dengan VLAN di perangkat yang berbeda, ada standar protokol yang digunakan yaitu...

Select one:

a.
IEEE 805.1Q

b.
IEEE 805.1Q

c.
IEEE 804.1Q

d.
IEEE 802.1Q

e.
IEEE 803.1Q

The correct answer is:

d. IEEE 802.1Q

IEEE 802.1Q is the standard protocol used for interacting with VLANs across different devices. It is a protocol that defines how VLAN tagging is

implemented, allowing for the identification and handling of VLAN traffic on Ethernet networks.

IEEE 802.1Q adds a 4-byte VLAN tag to Ethernet frames, which includes information such as the VLAN ID. This tagging enables devices to understand and process VLAN traffic correctly, ensuring that VLANs are properly segmented and managed across different network devices.

So, the correct answer is:

d. IEEE 802.1Q

---

m

IP Address terakhir pada jaringan kedua hasil subneting jaringan 192.168.10.0/24 menjadi 4 jaringan adalah ....

Select one:

a.
192.168.10.127/26

b.
192.168.10.62/26

c.
192.168.10.128/26

d.
192.168.10.65/26

e.
192.168.10.126/26

To subnet the network 192.168.10.0/24 into four networks, we need to borrow two bits from the host portion to create four subnets. This will result in a subnet mask of /26.

The last IP address in the second subnet can be calculated as follows:

First subnet: 192.168.10.0/26

- Network address: 192.168.10.0
- First usable IP: 192.168.10.1
- Last usable IP: 192.168.10.62
- Broadcast address: 192.168.10.63

Second subnet: 192.168.10.64/26

- Network address: 192.168.10.64
- First usable IP: 192.168.10.65
- Last usable IP: 192.168.10.126
- Broadcast address: 192.168.10.127

Therefore, the correct answer is:

d. 192.168.10.65/26

---

m

Tentukan netmask hasil dari subneting jaringan 172.16.0.0/16 jika jumlah maksimal pengguna pada masing-masing jaringan adalah 30!

Select one:

a.
255.255.255.240

b.
255.255.255.128

c.
255.255.255.192

d.
255.255.255.224

e.
255.255.255.160

To determine the netmask for subnetting the network 172.16.0.0/16 with a maximum of 30 users per subnet, we need to calculate the number of bits required to accommodate at least 30 hosts. The formula is 2^n - 2, where n is the number of host bits.

For 30 hosts, we need at least 5 host bits (2^5 - 2 = 30). Therefore, the subnet mask will be /27 (32 - 5 = 27).

Converting /27 to dotted decimal notation, we get:

255.255.255.224

So, the correct answer is:

d. 255.255.255.224

---

m Koneksi TCP diawali dan diakhiri oleh prosedur Three Way Handshake

Select one:
True
False

True

The statement is true. A TCP connection is initiated and terminated using a procedure called the Three-Way Handshake. The Three-Way Handshake is a three-step process that allows both the client and server to establish a reliable TCP connection before data transmission.

Here's a brief overview of the Three-Way Handshake:

1. SYN: The client sends a SYN (Synchronize) packet to the server, indicating its intent to establish a connection. The client sets the initial sequence number (ISN) in this packet.
2. SYN-ACK: Upon receiving the SYN packet, the server responds with a SYN-ACK (Synchronize-Acknowledgment) packet. The server acknowledges the client's SYN packet and sends its own SYN packet. The server also sets its own ISN.
3. ACK: Finally, the client acknowledges the server's SYN packet by sending an ACK (Acknowledgment) packet. The client sets the acknowledgement number (ACK) to the server's ISN plus one.

After the Three-Way Handshake is successfully completed, both the client and server are ready to exchange data over the established TCP connection. When the data transmission is complete, a similar process called the Four-Way Handshake is used to terminate the connection.

Therefore, the statement "Koneksi TCP diawali dan diakhiri oleh prosedur Three Way Handshake" (A

TCP connection is initiated and terminated by the Three-Way Handshake procedure) is true.

m Sebuah data dipecah menjadi 10 segmen oleh TCP, jika seluruh segment berhasil di kirim kecuali segmen no 8. Duplicate Ack nomor berapakah yang diterima oleh pengirim?

Select one:

a.
9

b.
8

c.
7

d.
6

e.
10

If all segments except segment number 8 were successfully sent, and the receiver detects the missing segment, it will send a duplicate acknowledgment for the next expected segment. Since segment number 8 was missing, the receiver would send an acknowledgment for segment number 9, indicating that it is still waiting for segment 8 to arrive.

Therefore, the duplicate acknowledgment received by the sender would be for segment number 9.

The correct answer is:

a. 9

---

m

Suatu model jaringan yang membagi jaringan secara logikal ke dalam beberapa jalur yang berbeda tapi lewat perangkat penghubung yang sama disebut teknologi...

Select one:

a.
Physical Switch

b.
Physical Bridge

c.
VLAN

d.
Dynamic routing

The correct answer is:

c. VLAN

VLAN stands for Virtual Local Area Network, which is a network technology that logically divides a single physical network into multiple virtual networks. VLANs allow for the segmentation and isolation of network traffic based on different

criteria, such as department, function, or security requirements.

By creating VLANs, a network can be divided into separate broadcast domains, which can improve network performance and security. VLANs are configured on switches, and they allow different devices to communicate with each other as if they were connected to separate physical networks, even though they may be using the same physical network infrastructure.

So, the correct answer is:

c. VLAN

---

m

Dalam pembuatan VLAN terdapat sebuah parameter utama yaitu...

Select one:

a.
Port trunk

b.
Untagged dan Vlan tangged

c.
Port akses

d.
Tagged dan Vlan tagged

e.
Tagged dan Untagged

The correct answer is:

e. Tagged dan Untagged

When creating VLANs, one of the main parameters to consider is whether a port should be tagged or untagged. These parameters define how the VLAN membership is assigned to the ports.

1. Tagged: A tagged port is configured to carry traffic for multiple VLANs. The VLAN membership is indicated by adding a VLAN tag (802.1Q tag) to each Ethernet frame. This allows the switch to differentiate between VLANs and forward the traffic accordingly. Tagged ports are typically used for trunk links between switches or connections to devices that support VLAN tagging, such as routers or servers.
2. Untagged: An untagged port is associated with a specific VLAN. Traffic received on an untagged port is assumed to be part of the associated VLAN, and the switch removes the VLAN tag before forwarding the frames. Untagged ports are commonly used to connect end devices, such as computers or printers, to the network.

Port trunk (option a) refers to a link that carries traffic for multiple VLANs, typically between switches. It is not a parameter for VLAN creation itself.

Port access (option c) refers to a switch port that is configured to belong to a single VLAN, allowing traffic from that VLAN only. It is related to the untagged parameter.

So, the correct answer is:

e. Tagged dan Untagged

---

m

Fungsi dari VLAN adalah...

Select one:

a.
Membagikan penumpukan data yang dikirim tanpa tujuan yang jelas, sehingga trafik pengiriman data pada jaringan akan semakin lancar.

b.
Membuat jaringan lebih public walaupun dalam satu perangkat yang sama, sehingga tidak perlu membeli banyak perangkat

c.
Memberikan sebuah metode untuk membagi satu fisik network ke banyak broadcast domain

d.
Kerja switch menjadi ringan

e.
Memberikan sebuah metode untuk membagi beberapa fisik network ke banyak broadcast domain

---

The correct answer is:

c. Memberikan sebuah metode untuk membagi satu fisik network ke banyak broadcast domain

The main function of VLAN (Virtual Local Area Network) is to provide a method for dividing a single physical network into multiple broadcast

domains. By creating VLANs, network administrators can logically separate and isolate network traffic based on different criteria, such as department, function, or security requirements. Each VLAN operates as if it is a separate network, even though they may share the same physical network infrastructure.

By dividing the network into VLANs, broadcast traffic is contained within each VLAN, reducing the overall broadcast domain size and improving network performance. VLANs also provide enhanced security by isolating traffic between VLANs, restricting access between different segments of the network.

Therefore, the correct answer is:

c. Memberikan sebuah metode untuk membagi satu fisik network ke banyak broadcast domain

---

m

Jika jaringan yang disediakan untuk topologi di atas adalah 192.168.15.0/24, maka tentukan jaringan H!

Select one:

a.
192.168.15.248/30

b.
192.168.15.244/30

c.
192.168.15.240/30

d.
192.168.15.246/30

e.
192.168.15.252/30

To determine the network H in the given topology with a network of 192.168.15.0/24, we need to consider the available subnets and their sizes.

Looking at the topology, we can see that the network H is connected to R1 via the subnet with four available IP addresses. This indicates a subnet size of /30 (or 255.255.255.252).

The correct answer is:

a. 192.168.15.248/30

---

m

Hypertext Transfer Protocol (HTTP) digunakan untuk mentransfer file yang menyusun Web pages dari World Wide Web (WWW)

Select one:
True
False

The statement is true.

Hypertext Transfer Protocol (HTTP) is indeed used to transfer files that make up web pages from the World Wide Web (WWW). It is an application layer protocol that enables the communication between web browsers and web servers. HTTP allows the retrieval of resources, such as HTML documents,

images, videos, and other media files, from web servers to be displayed in a web browser.

HTTP is the foundation of data communication on the web and is responsible for requesting and delivering web content across the internet. It follows a client-server model, where the web browser acts as the client, and the web server hosts the requested web resources.

So, the statement is true.

---

m

Dua Protocol Transport Layer yang digunakan yaitu UDP dan TCP, UDP Data dijamin sampai tujuan (reliable connection)

Select one:
True
False

The statement is false.

User Datagram Protocol (UDP) is a transport layer protocol that is used for sending datagrams over an IP network. Unlike Transmission Control Protocol (TCP), UDP does not provide reliable delivery of data. UDP is considered a connectionless protocol, meaning it does not establish a reliable, dedicated connection between the sender and receiver.

UDP does not guarantee that data will reach its destination or arrive in the correct order. It does not have built-in mechanisms for error recovery, flow control, or congestion control. UDP is often used for applications that prioritize speed and efficiency over reliability, such as real-time streaming, voice over IP (VoIP), and online gaming.

In contrast, TCP provides reliable, connection-oriented communication. It ensures that data is delivered in the correct order and handles retransmissions of lost packets. TCP implements various mechanisms, such as acknowledgments, sequence numbers, and sliding window flow control, to guarantee the reliable delivery of data.

Therefore, the statement is false. UDP does not provide reliable data delivery.

---

m

Best route dapat ditentukan berdasarkan algoritma berikut kecuali....

Select one:

a.
Link State

b.
Analytical Hierarchi Process

c.
Distance Vector

d.
Hybrid

The correct answer is:

b. Analytical Hierarchi Process

The Analytical Hierarchy Process (AHP) is not an algorithm used for determining the best route in networking. AHP is a decision-making method that

helps in solving complex problems by analyzing and prioritizing multiple criteria. It is commonly used in fields such as operations research, management science, and decision analysis.

On the other hand, the other options mentioned are algorithms commonly used in routing:

a. Link State: Link State routing algorithms, such as OSPF (Open Shortest Path First), use information about the complete network topology to determine the best routes. Each router in the network maintains a database of link state information, allowing them to calculate the shortest paths to destinations.

c. Distance Vector: Distance Vector routing algorithms, such as RIP (Routing Information Protocol), calculate the best route based on the distance or metric associated with each path. Routers exchange routing updates periodically to share information about their known routes.

d. Hybrid: Hybrid routing algorithms combine the characteristics of both link state and distance vector algorithms. They aim to leverage the advantages of each approach to achieve efficient and scalable routing.

Therefore, the correct answer is:

b. Analytical Hierarchi Process

---

m

Contoh port yang digunakan oleh well-known protokol adalah HTTP, HTTPS, dan SSL

Select one:

True
False

The statement is false.

The well-known port numbers are assigned by the Internet Assigned Numbers Authority (IANA) to specific protocols or services. These port numbers range from 0 to 1023 and are reserved for commonly used protocols.

HTTP (Hypertext Transfer Protocol) typically uses port 80, HTTPS (HTTP Secure) typically uses port 443, and SSL (Secure Sockets Layer) is a security protocol that can be used with various port numbers depending on the specific application.

While HTTP, HTTPS, and SSL are well-known protocols, the statement does not accurately describe the relationship between these protocols and their assigned port numbers. The well-known port number for HTTP is 80, for HTTPS is 443, and SSL does not have a specific well-known port number as it is a protocol that can be used with various applications and port numbers.

Therefore, the correct statement would be:

False.

m Apakah RTT itu....

Select one:

a.
Waktu yang diperlukan sebuah packet dari pengirim hingga ke penerima

b.
Timer yang berjalan sejak packet dikirim

c.
Waktu antara packet dikirim dan mendapatkan respon dari penerima

d.
Waktu yang diperlukan untuk mengindikasi pengiriman ulang sebuah packet

e.
Waktu yang diperlukan untuk mengenali paket yang hilang

Jawaban yang benar adalah:

c. Waktu antara packet dikirim dan mendapatkan respon dari penerima

RTT (Round-Trip Time) adalah waktu yang dibutuhkan untuk sebuah paket data dikirimkan dari pengirim ke penerima dan kemudian kembali lagi ke pengirim. Ini mencakup waktu yang diperlukan untuk mengirim paket dari sumber, waktu yang dibutuhkan untuk memproses paket di tujuan, serta waktu yang diperlukan untuk mengirimkan respon balik ke sumber.

Jadi, RTT merupakan waktu yang diperlukan antara pengiriman paket dan penerimaan respon dari penerima.

---

m

Tujuan dari Three Way handshake, keculai...

Select one:

a.
Mencapai utilitas jaringan maximal dengan cepat

b.
Bertukar informasi ISN antara pengirimin dan penerima

c.
Sinkronisasi antara penerima dan pengirim

d.
Memulai koneksi

e.
Mengakhiri koneksi

Jawaban yang benar adalah:

e. Mengakhiri koneksi

Tujuan dari Three Way Handshake adalah:

a. Mencapai utilitas jaringan maksimal dengan cepat: Melalui Three Way Handshake, koneksi jaringan dapat dibangun dengan efisien dan optimal.

b. Bertukar informasi ISN antara pengirim dan penerima: ISN (Initial Sequence Number) adalah nomor urut awal yang digunakan dalam komunikasi TCP. Melalui Three Way Handshake, pengirim dan

penerima bertukar informasi ISN untuk menginisialisasi koneksi.

c. Sinkronisasi antara penerima dan pengirim: Three Way Handshake memastikan bahwa pengirim dan penerima sinkron dalam proses komunikasi TCP.

d. Memulai koneksi: Three Way Handshake digunakan untuk memulai koneksi antara pengirim dan penerima.

Namun, mengakhiri koneksi bukanlah tujuan dari Three Way Handshake. Untuk mengakhiri koneksi TCP, digunakan prosedur yang disebut Four Way Handshake.