# CtrlS Datacenters Placement Questions And Answers

## DATA CENTER

**Q1. What is Data Center?**

**ANS:**

Data centers are physical or virtual infrastructure used by enterprises to house computer, server and networking systems and components for the companys information technology (IT) needs, which typically involve storing, processing and serving large amounts of mission-critical data to clients in a client/server architecture.

**Q2. What is a green data center?**

**ANS:**

A green data center is one that can operate with maximum energy efficiency and minimum environmental impact. This includes the mechanical, lighting, electrical and IT equipment (servers, storage, network, etc.).

Within corporations, the focus on green data centers is driven primarily by a desire to reduce the tremendous electricity costs associated with operating a data center. That is, going green is recognized as a way to reduce operating expense significantly for the IT infrastructure.

**Q3. What does Data Center Services mean?**

**ANS:**

Data center services are services that help to either create, implement or maintain a data center, or to enhance what that data center does for an enterprise.

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**Q4. What does Data Center Management mean?**

## ANS:

Data center management plays a crucial role in protecting data and keeping it secure so as to avoid data security breaches.

Functions of data center management include upgrading hardware and software/operating systems, managing data distribution and storage, backup regimes, emergency planning and some technical support.

**Q5. How often does the data center load test its generators?**

## ANS:

Fuel consumption and expensive test equipment makes load testing generators a costly maintenance item. Sometimes, in lieu of regular load testing, data centers will use unexpected utility power outages as a way to load test their generators on client IT loads.

## TECHNICAL

**Q1. What are the functions of a network administrator?**

## ANS:

**A network administrator has many responsibilities that can be summarize into 3 key functions: installation of a network, configuration of network settings, and maintenance/troubleshooting of networks.**

**Q2. What is IP?**

## ANS:

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**Its a unique 32 bits software address of a node in a network.**

**Q3. What is private IP?**

**ANS:**

**Three ranges of IP addresses have been reserved for private address and they are not valid for use on the Internet. If you want to access internet with these address you must have to use proxy server or NAT server (on normal cases the role of proxy server is played by your ISP.).If you do decide to implement a private IP address range, you can use IP addresses from any of the following classes:**

**Class A 10.0.0.0 10.255.255.255**
**Class B 172.16.0.0 172.31.255.255**
**Class C 192.168.0.0 192.168.255.255**

**Q4. What is public IP address?**

**ANS:**

**A public IP address is an address leased from an ISP that allows or enables direct Internet communication.**

**Q5. What is the benefit of subnetting?**

**ANS:**

1. **Reduce the size of the routing tables.**
2. **Reduce network traffic. Broadcast traffic can be isolated within a single logical network.**

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3. **Provide a way to secure network traffic by isolating it from the rest of the network.**

**Q6. What are the differences between static IP addressing and dynamic IP addressing?**

**ANS:**

**With static IP addressing, a computer (or other device) is configured to always use the same IP address. With dynamic addressing, the IP address can change periodically and is managed by a centralized network service.**

**Q7. What is APIPA?**

**ANS:**

**Automatic private IP addressing (APIPA) is a feature mainly found in Microsoft operating systems. APIPA enables clients to still communicate with other computers on the same network segment until an IP address can be obtained from a DHCP server, allowing the machine to fully participate on the network.**

**The range of these IP address are the 169.254.0.1 to 169.254.255.254 with a default Class B subnet mask of 255.255.0.0.**

**Q8. Describe Network Topology.**

**ANS:**

**Network Topology refers to the layout of a computer network. It shows how devices and cables are physically laid out, as well as how they connect to one another.**

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**Q9. What is VPN?**

**ANS:**

**VPN means Virtual Private Network, a technology that allows a secure tunnel to be created across a network such as the Internet. For example, VPNs allow you to establish a secure dial-up connection to a remote server.**

**Q10. What are different ways of securing a computer network?**

**ANS:**

**There are several ways to do this. Install reliable and updated anti-virus program on all computers. Make sure firewalls are setup and configured properly. User authentication will also help a lot. All of these combined would make a highly secured network.**

**Q11. What is WAN?**

**ANS:**

**WAN stands for Wide Area Network. It is an interconnection of computers and devices that are geographically dispersed. It connects networks that are located in different regions and countries.**

**Q12. What are MAC addresses?**

**ANS:**

**MAC, or Media Access Control, uniquely identifies a device on the network. It is also known as physical address or Ethernet address. A MAC address is made up of 6-byte parts.**

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**Q13. What are firewalls?**

**ANS:**

**Firewalls serve to protect an internal network from external attacks. These external threats can be hackers who want to steal data or computer viruses that can wipe out data in an instant. It also prevents other users from external networks from gaining access to the private network.**

**Q14. Describe star topology.**

**ANS:**

**Star topology consists of a central hub that connects to nodes. This is one of the easiest to setup and maintain.**

**Q15. What are gateways?**

**ANS:**

**Gateways provide connectivity between two or more network segments. It is usually a computer that runs the gateway software and provides translation services. This translation is a key in allowing different systems to communicate on the network.**

**Q16. What is the disadvantage of a star topology?**

**ANS:**

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**One major disadvantage of star topology is that once the central hub or switch get damaged, the entire network becomes unusable.**

**Q17. What is DHCP?**

**ANS:**

**DHCP is short for Dynamic Host Configuration Protocol. Its main task is to automatically assign an IP address to devices across the network. It first checks for the next available address not yet taken by any device, then assigns this to a network device.**

## Q18. What common software problems can lead to network defects?

**ANS:**

**Software related problems can be any or a combination of the following:**

- **client server problems**
- **application conflicts**
- **error in configuration**
- **protocol mismatch**
- **security issues**
- **user policy and rights issues**

**Q19. What are the different network protocols that are supported by Windows RRAS services?**

**ANS:**

**There are three main network protocols supported: NetBEUI, TCP/IP, and IPX.**

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**Q20. What are some drawbacks of implementing a ring topology?**

**ANS:**

**In case one workstation on the network suffers a malfunction, it can bring down the entire network. Another drawback is that when there are adjustments and reconfigurations needed to be performed on a particular part of the network, the entire network has to be temporarily brought down as well.**

**Q21. What is the importance of Encryption on a network?**

**ANS:**

**Encryption is the process of translating information into a code that is unreadable by the user. It is then translated back or decrypted back to its normal readable format using a secret key or password.**

**Encryption help ensure that information that is intercepted halfway would remain unreadable because the user has to have the correct password or key for it.**

**Q22. Explain the importance of authentication.**

**ANS:**

**Authentication is the process of verifying a users credentials before he can log into the network. It is normally performed using a username and password.**

**This provides a secure means of limiting the access from unwanted intruders on the network.**

**Q23. What is the advantage of mesh topology?**

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**ANS:**

**In the event that one link fails, there will always be another available. Mesh topology is actually one of the most fault-tolerant network topology.**

**Q24. What is the maximum segment length of a 100 Base - FX network?**

**ANS:**

**The maximum allowable length for a network segment using 100Base-FX is 412 meters. The maximum length for the entire network is 5 kilometers.**

**Q25. What is DoS?**

**ANS:**

**DoS, or Denial-of-Service attack, is an attempt to prevent users from being able to access the internet or any other network services. Such attacks may come in different forms and are done by a group of perpetuators.**

**One common method of doing this is to overload the system server so it cannot anymore process legitimate traffic and will be forced to reset.**