1. Which type o f a DNS should be created in kumasi office to mirror the primary zone in Accra. Justify your answer.

Secondary DNS zone for kumasi.

Provides redundancy if the Accra(primary) DNS server becomes unavailable.

Reduces WAN traffic by handling local DNS queries in ksi.

1. Describe the process of configuring a NDS zone in the kumasi.

* On the kumasi DNS Server.
* Open the DNS manager,
* Right clieck on the flz, select new zone
* In the wizard

Select the secondary zone

Enter the same name as the primary zone

Specify the IP address of the Accra primary DNS server as the master server.

Complete the wizard.

The zone should automatically attempt a transfer from the primary zone

Check for the successful zone repliaction in the DNS manager.

Adjust through the SOA record settings in the primary server.

1. How would you ensure zone transfers are secure between the primary zone and secondary zone

* Transaction signature
* Firewall rules
* IP restrictions
* VPN OR private network

Whats the function of the SOA.

It serve as the control center of the DNS zone management synchronization and admnistrative oversight.

Secondary DNS Zone.

Because it provides redundancy if the Accra (primary) DNS server becomes unavailalble

Reduces WAN traffic by handling local DNS queries in kumasi.

1. Describe the process of configuring a NDS zone in the kumasi.

* On the kumasi DNS srver
* Open the DNS manager,
* Right click on the flz, slecet new zone
* In the wizard

Select the secondary zone

Enter the same name as the primary zone

Specify the IP address of the Accra primary DNS server as the master sever.

Complete the wizard.

* This zone should automatically attempt to transfer from the primary zone.
* Check for succesful zone replication in the dns manager.
* Adjust through the SOA record settings in the primary server.

When the primary zone is updated, the secondary server checks the soa record refresh interval. After the refresh time elapses, the secondary zone queries the primary soa record. Compare the numbers, if the primary is higher, initiates zone transfer.

How would you ensure zone transfers are secure between the primary zone and secondary zone

Firewall rules

Transaction signature

IP address restrictions

VPN or private network.

Allow TCP port 53

Allow UDP port 53

Directional rules

Implement the rules on bothe edge fireawall and host base firewall

When the primary zone is updated, the secondary server checks the soa record refresh interval. After the refresh time elapses, the secondary queries the primary soa record. Comapre the serial number, if the primary numbers are higher, initaites zone transfer.

1. On the primary server in Accra,

Right click on the zone in the DNS Manager

Select properties, choose zone transfer tab.

Select allow zone transfer and choose only to the following servers

Then add the IP address of the kumasi.

Enable DNSSEC for signed zones to ensure data integrity

Use TSIG( Transaction signature)keys for authentication between servers.

Restrict transfers to TCP port 53 and Implement firewall rules to alow only from trusted IPS.