U1 discussion

Technology, Information Technology

Cause of IP Address Conflict and its Resolution s Cause of IP Address Conflict and its Resolution

As a network administrator, I am tasked with maintaining the computer software and hardware systems which make up the computer network, such as, monitoring and maintaining of either converged infrastructure or active data network, monitoring network traffic, testing the network for weakness, and installing and implementing security programs (Bautts, Dawson, & Purdy, 2010). The Dynamic Host Configuration Protocol (DHCP) is a network protocol which enables the server to assign automatically an IP address to a computer from a definite scope configured from a certain network. The DCHP allows the network administrator to supervise and distribute IP addresses from a central point (Morimoto, Noel, Droubi, Mistry, & Amaris, 2009).

The DHCP server manages a pool of IP addresses about client configuration. The server assigned IP addresses that conflicted with other addresses because, first, in a busy network environment, an offline computer might have been brought online with a lease that it believes has not expired. On the other hand, the DHCP server believes the lease has expired. The server only checks the list of current leases to establish if an address is available and does not question the network to determine if an address is being used by default. As cited by Morimoto et al. (2009), the other cause of the IP addresses conflict may be malfunctioning of the internal components of the DCHP server. This causes them to lose track of which systems are utilizing which addresses. Another cause may be a similarly configured DCHP server is handing out overlapping addresses. Lastly, the two systems might have been assigned identical static address.

Fixing the problem

From the command prompt, enter IPCONFIG /RELEASE and IPCONFIG /RENEW.

The DCHP server needs to check the IP addresses by sending a ping request over the network

The conflict detection is to be set to a value greater than 0.

Since a every device with a static address can cause conflict if that address is already given out by the DCHP, this can be fixed by reducing the number of addresses in the DCHP pool.

Making sure that only one server is running while all others are switched off.

Some of the questions I will ask my coworkers who are familiar with network configuration include

Can the DHCP servers be used in larger networks?

How does the DHCP server check the IP addresses?

What is an IP address conflict?

When does the IP address conflict occur?

How can you resolve the IP address conflict?

References

Bautts, T., Dawson, T., & Purdy, G. (2010). Linux Network Administrators Guide. New York: OReilly.

Morimoto, R., Noel, M., Droubi, O., Mistry, R., & Amaris, C. (2009). Windows Server 2008 Unleashed. New York: Sams Publishing.