

Re: DHCP serving more than one subnet (longish)

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JF Mezei wrote:

> *Mark Berryman wrote:*

>

>> *DHCP packets are formatted the same as any other IP packet. The only*

>> *real difference is that the source address is all zeros and the*

>> *destination address is all ones (which means it is a broadcast packet).*

>

>

> *Responses from the server however rely on the ethernet address only since*

> *there is no IP address to send the response to. (responses are not*

> *broadcasts). So while it may have the same format as an IP packet, it isn't*

> *one per say when it comes to issues related to routers.*

Not correct. DHCP works over media other than ethernet. The DHCP server knows nothing about any ethernet packet, all it ever sees is the UDP packet. The ethernet (or other media) encapsulation has been stripped off by the time the DHCP server sees the packet. The DHCP server gets what you are calling the "ethernet address" from the chaddr field of the DHCP packet. If the client identifier option has been included in the packet by the client then the DHCP server may ignore the "ethernet address" entirely. The DHCP packet itself is a fully built, fully functional UDP packet. It most definitely is NOT an ethernet-only packet.

>

>> *Optional. The response can be either broadcast or addressed directly.*

>

>

> *Nop. Responses are sent to the client's ethernet address or to the ip address*

> *of a relay server if the giaddr field is not null. In the later case, the*

> *relay server will issue an ethernet packet on the other ethernet segment that*

> *is addressed to the client directly.*

Sorry, wrong again. To quote from the RFC:

If the 'giaddr' field in a DHCP message from a client is non-zero, the server sends any return messages to the 'DHCP server' port on the BOOTP relay agent whose address appears in 'giaddr'. [This will be

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the case if the request is relayed through a router].