Server Override

draft-ietf-dhc-server-override-03.txt
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Background on Server Override

• Relay agent tells DHCP server to put a particular address of the relay agent in the dhcp-server-identifier option when talking to a DHCP client.

• This causes the DHCP client to unicast renews to the relay agent, which will forward it on to the DHCP server.
Situation

Presently, the presence of a giaddr in the packet is the way the DHCP server distinguishes a broadcast from a unicast.

DHCP server can’t tell if the packet forwarded by the relay agent was broadcast to the relay agent or unicast to the relay agent.
Issues

• RFC 2131 guidance on when to NAK based on network connectivity can’t be followed – may NAK when DHCP client unicast a renew. This makes every renew a rebinding, more or less.

• When using load balancing can’t tell renew from rebinding – generates two ACK’s, makes load balancing less valuable

• DHCP client gets two ACK’s whenever failover is used (regardless of load balancing).
Solutions Discussed To Date

• Don’t worry about it, reasonable things still work reasonably. Don’t configure this on your relay agent if you don’t have a reasonable configuration. Load balancing doesn’t play well with server override.
• Add flags byte to server-id-overide sub-option to indicate unicast/broadcast receipt by relay agent.
• Add new suboption to relay-agent-info option to indicate unicast/broadcast receipt. Adds value beyond server-id-overide suboption.
• Move load balancing algorithm to relay agent.
Recommendation

• New sub-option flags byte for relay-agent-info option. First flag is unicast flag. Low overhead in relay agent, allows servers to deal intelligently with forwarded packets.

• Doesn’t preclude a load balancing algorithm draft for relay agents, but is considerably less difficult to implement (let alone approve).