



Configuring a Relay Agent

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» What is DHCP?

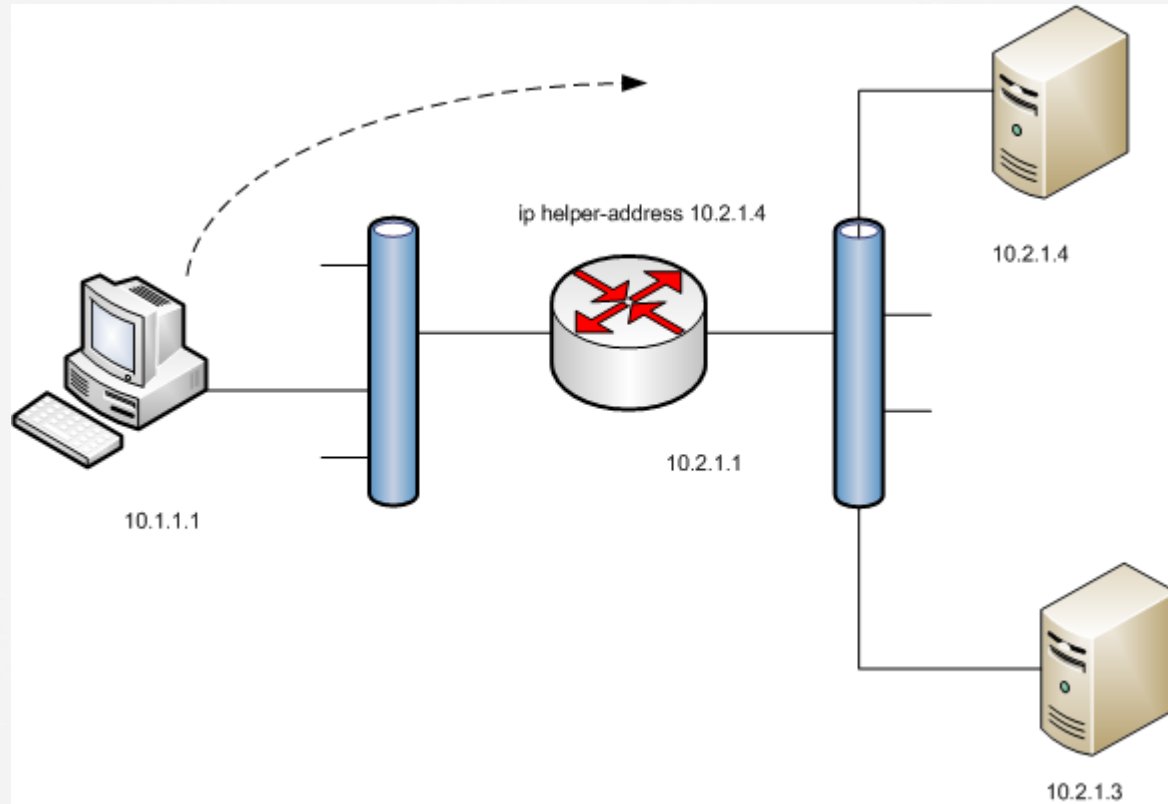
» What is DORA?

- Discovery
- Offer
- Request
- Acknowledgement

» Using Wireshark to capture DHCP

- To troubleshoot connectivity problems

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» Communications review

- Client makes a request for an IP address via broadcast
- If DHCP server is on separate segment, the router will send the request to that server
- Routers do not pass broadcasts by default
- DORA will continue via this configuration between the client(s) and the DHCP server

» Relay agents

- Used to pass the broadcast and facilitate the communication between the host requesting and the server responding

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No.	Time	Source	Destination	Protocol	Expert	Length	Info
1	0.000000	0.0.0.0	255.255.255.255	DHCP		314	DHCP Discover - Transaction ID 0x3d1d
2	0.000295	192.168.0.1	192.168.0.10	DHCP		342	DHCP Offer - Transaction ID 0x3d1d
3	0.070031	0.0.0.0	255.255.255.255	DHCP		314	DHCP Request - Transaction ID 0x3d1e
4	0.070345	192.168.0.1	192.168.0.10	DHCP		342	DHCP ACK - Transaction ID 0x3d1e

+	Frame 1: 314 bytes on wire (2512 bits), 314 bytes captured (2512 bits)
+	Ethernet II, Src: Grandstr_01:fc:42 (00:0b:82:01:fc:42), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
+	Internet Protocol Version 4, Src: 0.0.0.0 (0.0.0.0), Dst: 255.255.255.255 (255.255.255.255)
-	User Datagram Protocol, Src Port: bootpc (68), Dst Port: bootps (67)
	Source port: bootpc (68)
	Destination port: bootps (67)
	Length: 280
+	Checksum: 0x591f [validation disabled]
-	Bootstrap Protocol
	Message type: Boot Request (1)
	Hardware type: Ethernet (0x01)
	Hardware address length: 6
	Hops: 0
	Transaction ID: 0x00003d1d
	Seconds elapsed: 0
+	Bootp flags: 0x0000 (Unicast)
	Client IP address: 0.0.0.0 (0.0.0.0)
	Your (client) IP address: 0.0.0.0 (0.0.0.0)
	Next server IP address: 0.0.0.0 (0.0.0.0)
	Relay agent IP address: 0.0.0.0 (0.0.0.0)
	Client MAC address: Grandstr_01:fc:42 (00:0b:82:01:fc:42)
	Client hardware address padding: 00000000000000000000
	Server host name not given
	Boot file name not given
	Magic cookie: DHCP

Questions?