



# Reviewing DORA

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» **What is DHCP?**

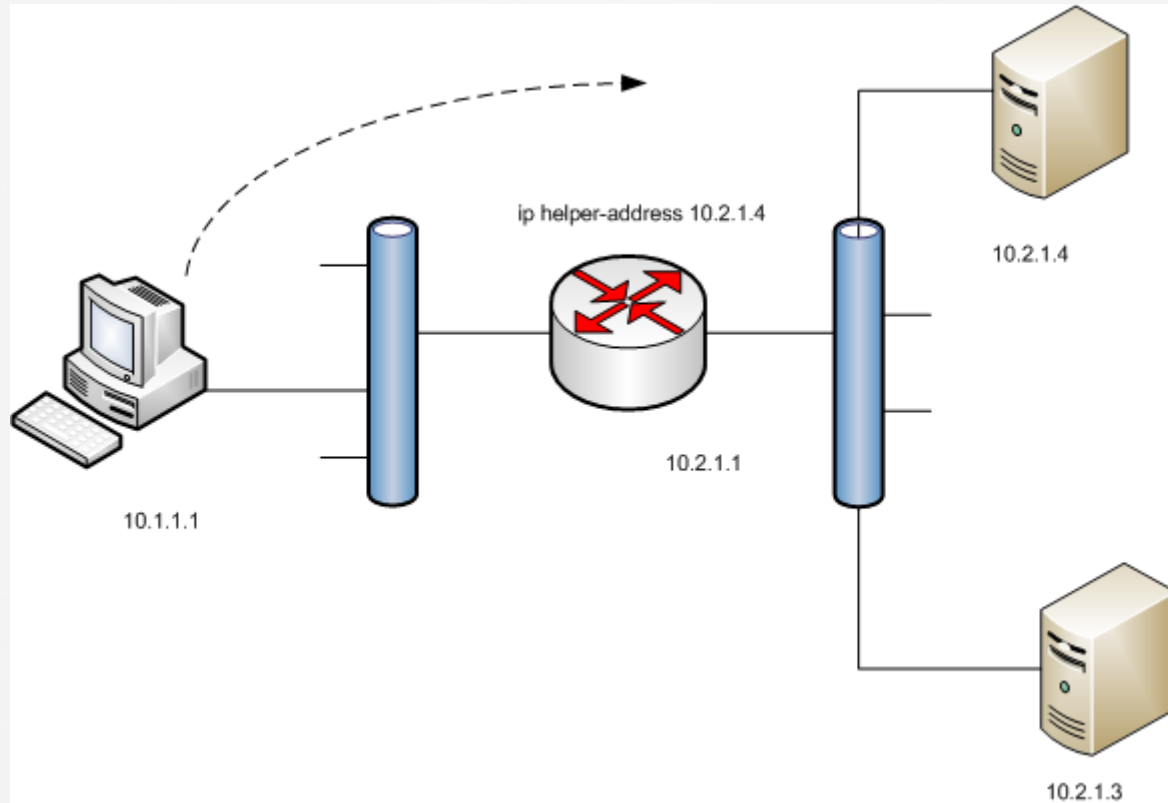
» **What is DORA?**

- Discovery
- Offer
- Request
- Acknowledgement

» **Using Wireshark to capture DHCP**

- To troubleshoot connectivity problems

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## » Communications review

- Client makes request for an IP address via broadcast
- If DHCP server is on separate segment, router will send 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 communication between the host requesting and the server responding

# Reviewing DORA

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?