



Mist- Proxy URL Configuration via DHCP Option 43 with Microsoft Windows Server

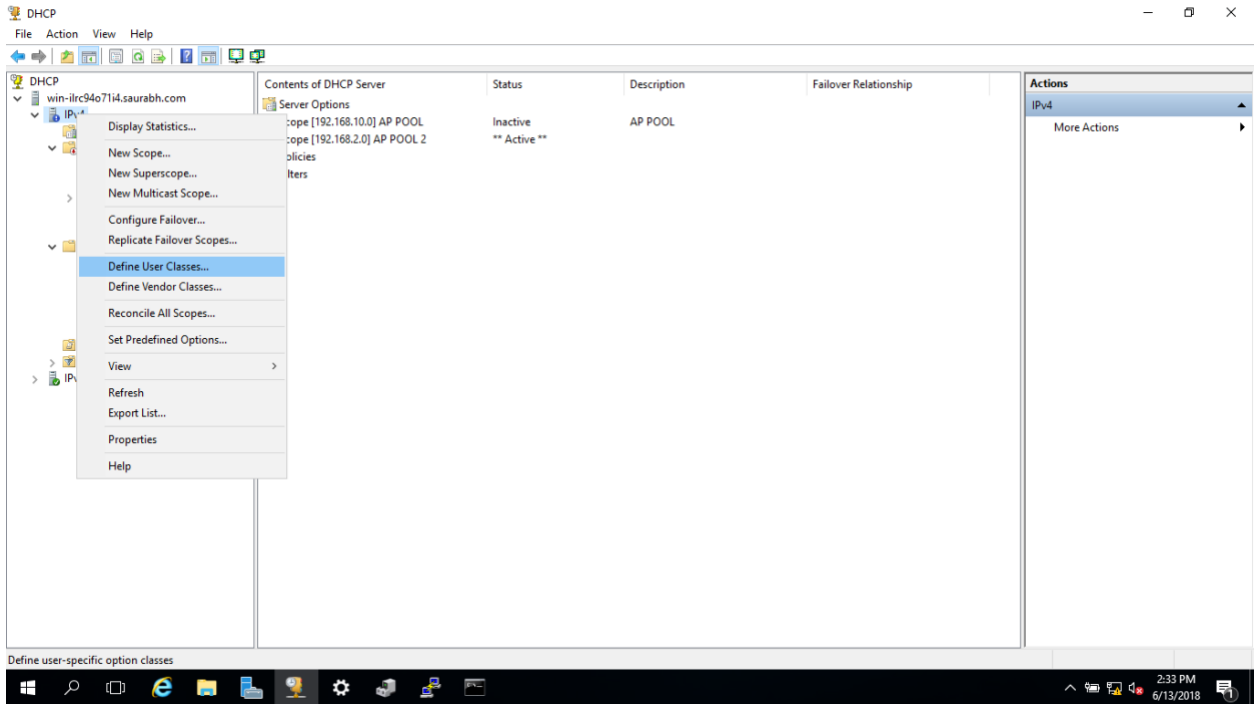


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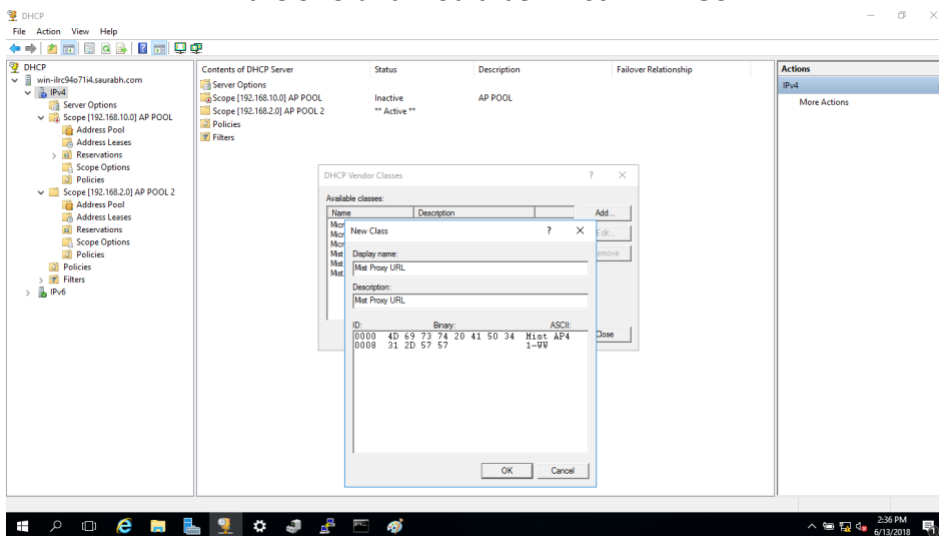
Define Vendor Class (Option 60)

a. Define Vendor Classes under IPV4



b. Add a new vendor class – noted here as Mist Proxy URL (Please feel free to use a generic name Mist)

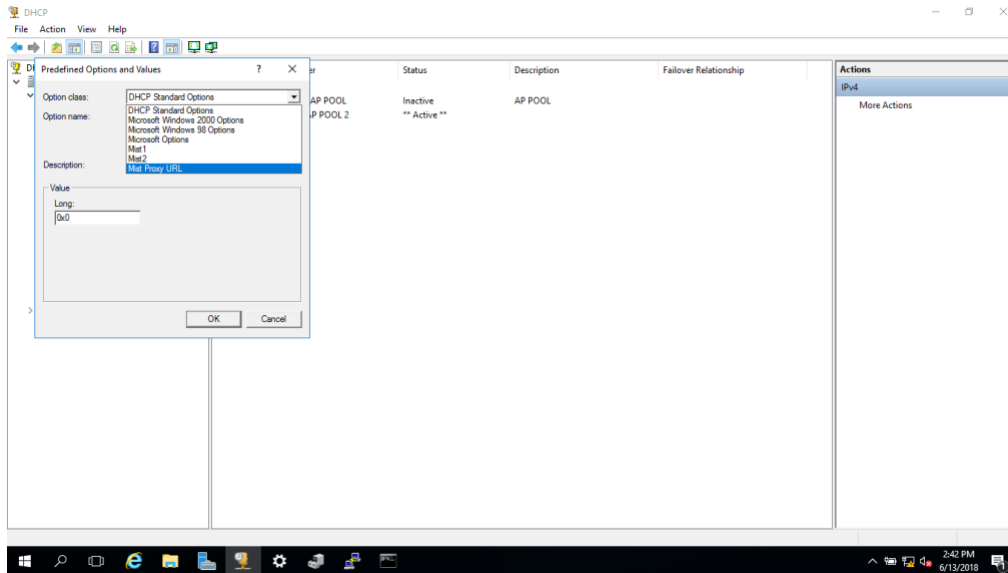
i. Under ASCII tab – Provide the Vendor Class Identifier which is based on the SKU and would be 'Mist AP41-US'



(Note - This screenshot shows the example of Mist AP41-WW)

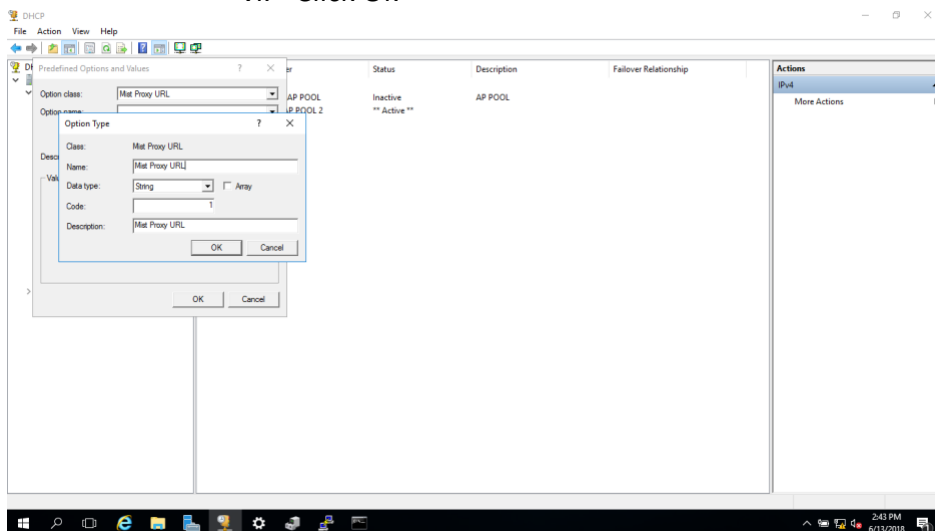
Set Predefined Options

c. Right Click on IPV4 -> Set Predefined Options



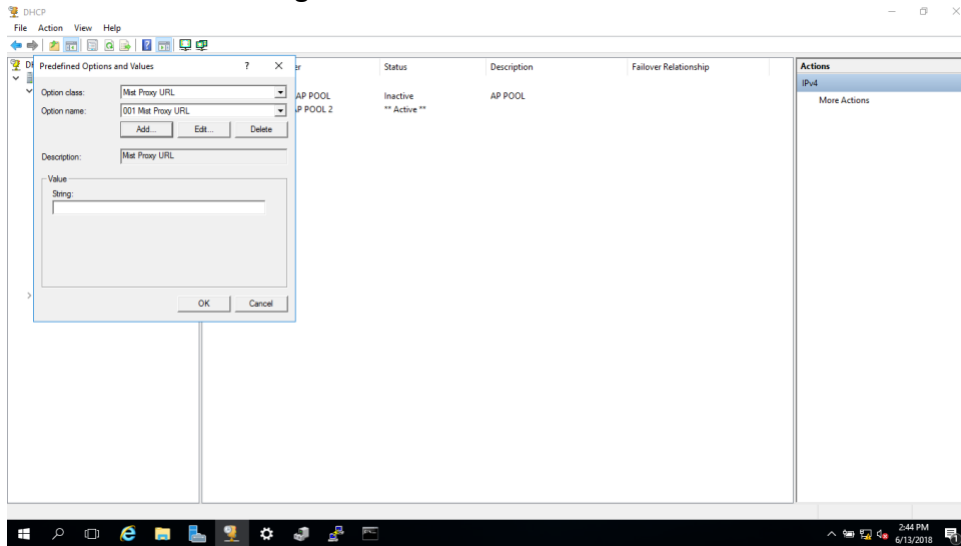
d. Choose the Vendor Class that we just created, In our case “Mist Proxy URL”

- i. Add an option
- ii. Provide a name “Mist Proxy URL” in the shown below
- iii. Data type is “String”
- iv. Code is 1
- v. Adding a description is optional
- vi. Click Ok



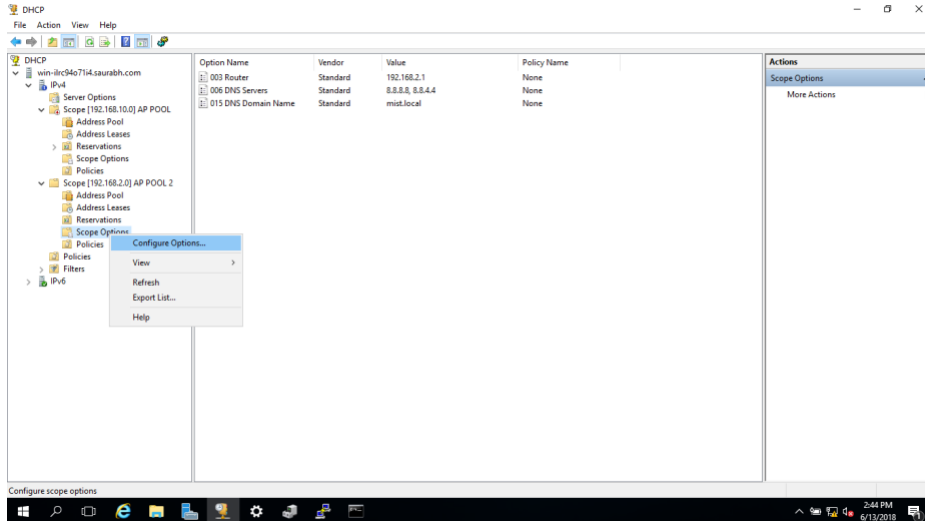


c. Leave the "String" value blank and click Ok

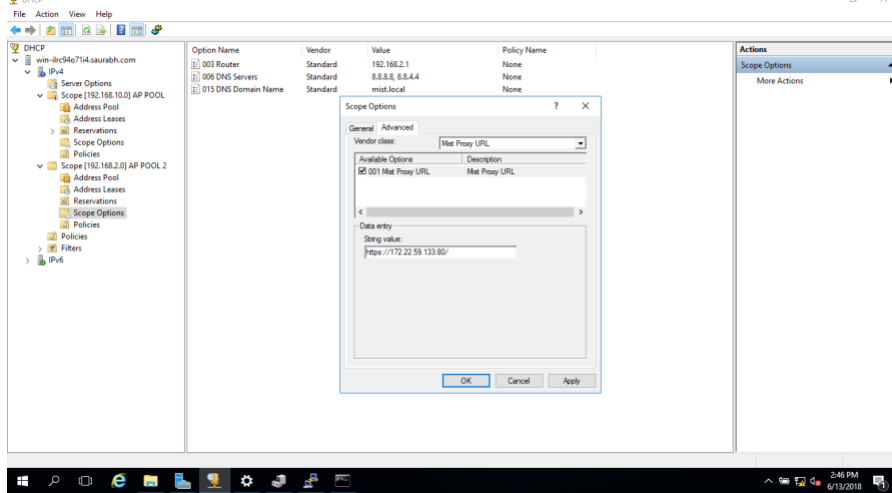


Configure Scope Options (Option 43)

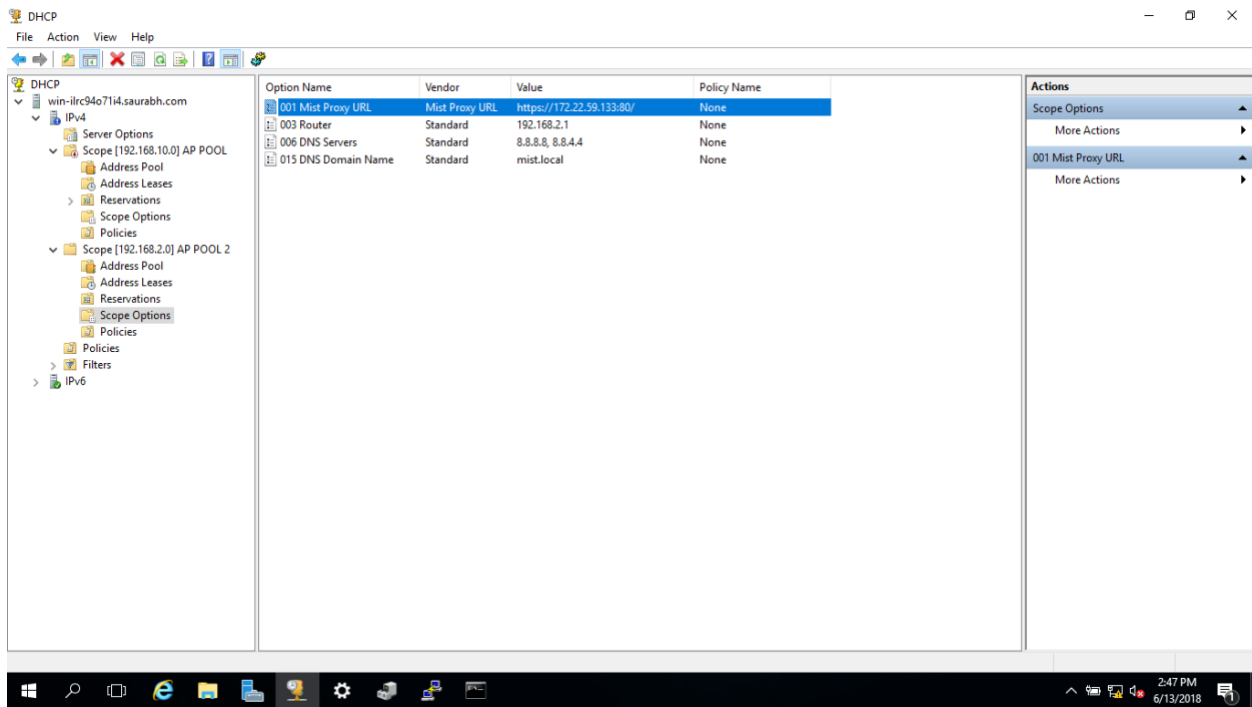
e. Under the appropriate pool -> Scope Options -> Configure Options



- f. Go into advanced tab -> Choose the Mist Vendor Class
- g. Check the option
- h. Provide the proxy string value
- i. Click OK



f. The options tab would now also populate the proxy URL, which completes the config on the Server



DHCP Discover Packet indicating the Vendor Class Identifier from Mist AP

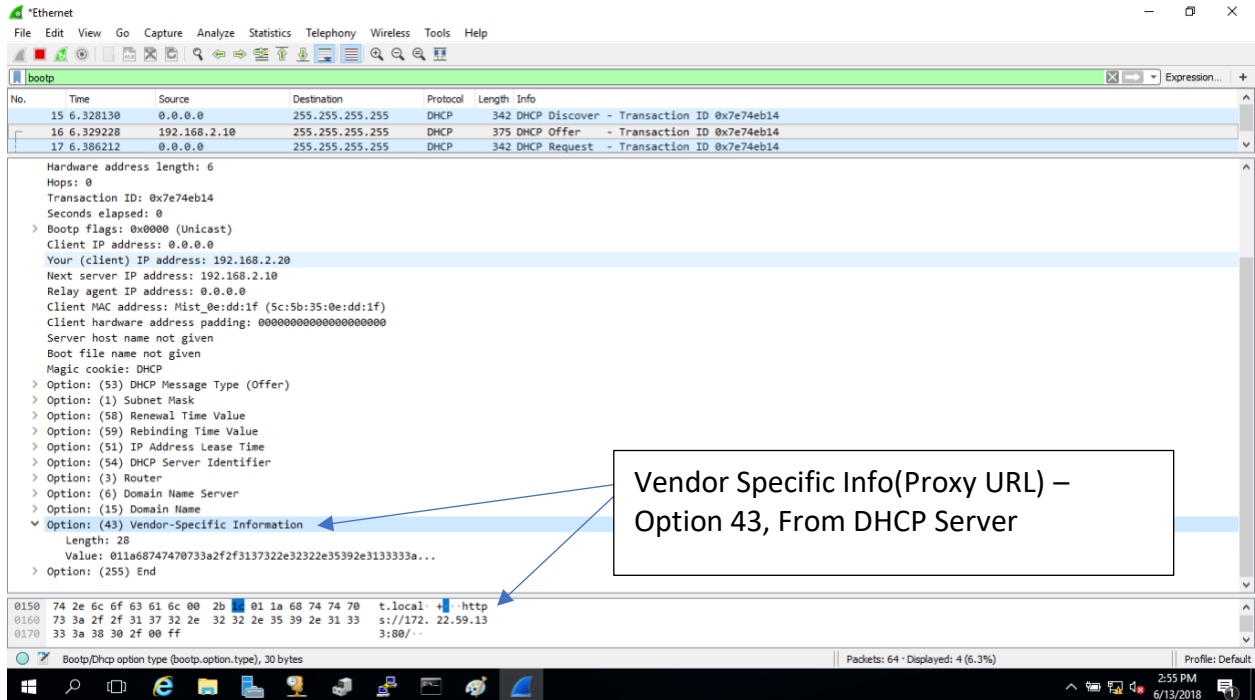
no.	Time	Source	Destination	Protocol	Length	Info
19	4.898988	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover - Transaction ID 0xcc1d87f4
20	4.899912	192.168.2.10	255.255.255.255	DHCP	371	DHCP Offer - Transaction ID 0xcc1d87f4
21	4.906657	0.0.0.0	255.255.255.255	DHCP	342	DHCP Request - Transaction ID 0xcc1d87f4


```

Bootstrap Protocol (Discover)
  Message type: Boot Request (1)
  Hardware type: Ethernet (0x01)
  Hardware address length: 6
  Hops: 0
  Transaction ID: 0xcc1d87f4
  Seconds elapsed: 0
  > Bootp flags: 0x0000 (Unicast)
  Client IP address: 0.0.0.0
  Your (client) IP address: 0.0.0.0
  Next server IP address: 0.0.0.0
  Relay agent IP address: 0.0.0.0
  Client MAC address: Mist_0e:dd:1f (5c:5b:35:0e:dd:1f)
  Client hardware address padding: 00000000000000000000
  Server host name not given
  Boot file name not given
  Magic cookie: DHCP
  > Option: (53) DHCP Message Type (Discover)
  > Option: (61) Client identifier
  > Option: (57) Maximum DHCP Message Size
  > Option: (55) Parameter Request List
  > Option: (60) Vendor class identifier
    Length: 12
    Vendor class identifier: Mist AP41-WW
  > Option: (255) End
    Option End: 255
    Padding: 0000000000000000000000000000000000000000000000000000000
  
```

You will see Vendor Class Identifier – Mist AP41-US
(This was a capture from a SKU which was for WW)

DHCP Offer packet containing the Proxy URL as part of Option 43 in Hex



The image shows a Wireshark capture of a DHCP Offer packet. The packet list pane shows three DHCP messages: Discover (No. 15), Offer (No. 16), and Request (No. 17). The packet details pane for the Offer packet (No. 16) is expanded to show the DHCP options. Option 43, Vendor-Specific Information, is highlighted in blue. A callout box with a white background and black border points to this option, containing the text: "Vendor Specific Info(Proxy URL) – Option 43, From DHCP Server". The value of Option 43 is shown as a hexadecimal string: 011a687470733a2f2f3137322e32322e35392e3133333a...

No.	Time	Source	Destination	Protocol	Length	Info
15	6.328130	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover - Transaction ID 0x7e74eb14
16	6.329228	192.168.2.10	255.255.255.255	DHCP	375	DHCP Offer - Transaction ID 0x7e74eb14
17	6.386212	0.0.0.0	255.255.255.255	DHCP	342	DHCP Request - Transaction ID 0x7e74eb14

```

Hardware address length: 6
Hops: 0
Transaction ID: 0x7e74eb14
Seconds elapsed: 0
  > Bootp flags: 0x0000 (Unicast)
Client IP address: 0.0.0.0
Your (client) IP address: 192.168.2.20
Next server IP address: 192.168.2.10
Relay agent IP address: 0.0.0.0
Client MAC address: Mist_0e:dd:1f (5c:5b:35:0e:dd:1f)
Client hardware address padding: 00000000000000000000
Server host name not given
Boot file name not given
Magic cookie: DHCP
  > Option: (53) DHCP Message Type (Offer)
  > Option: (1) Subnet Mask
  > Option: (58) Renewal Time Value
  > Option: (59) Rebinding Time Value
  > Option: (51) IP Address Lease Time
  > Option: (54) DHCP Server Identifier
  > Option: (3) Router
  > Option: (6) Domain Name Server
  > Option: (15) Domain Name
  > Option: (43) Vendor-Specific Information
      Length: 28
      Value: 011a687470733a2f2f3137322e32322e35392e3133333a...
  > Option: (255) End
  
```

0150 74 2e 6c 6f 63 61 6c 00 2b 01 1a 68 74 74 70 t.local - http
0160 73 3a 2f 2f 31 37 32 2e 32 32 2e 35 39 2e 31 33 s://172. 22.59.13
0170 33 3a 38 30 2f 00 ff 3:80/..