Configurazione e verifica di DHCP in un fabric VxLAN per Nexus 9000 con NX-OS e Windows Server 2022

Sommario

Introduzione Prerequisiti Requisiti Componenti usati Premesse Configurazione della sovrapposizione e della sovrapposizione per VxLAN in laboratorio **DORSO** FOGLIA-1 LEAF-1-vPC LEAF-2-vPC N9K-ACCESS Configurazione DHCP sugli switch Nexus FOGLIA-1 DHCP LEAF-1-vPC DHCP LEAF-2-vPC Configurazione del server DHCP in Windows Server 2022 Configurazione dell'ambito di indirizzamento IP per gli host. Configurazione dell'ambito per gli indirizzi IP univoci dai loopback in SVI come agente di inoltro DCHP. Configurazione dell'ambito esteso per l'infrastruttura VxLAN. Configurare l'opzione 82 negli ambiti host. Packet-walk DCHP dall'inizio alla fine in VxLAN Fabric. **Discovery inviato dall'HOST-1** Rilevamento su FOGLIA-1 Rilevamento sul dorso Discovery su LEAF-1-vPC Rilevamento ricevuto sul server DHCP Offerta DHCP inviata dal server DHCP Offerta DHCP su LEAF-2-vPC Offerta DHCP vPC SPINE Offerta DHCP su LEAF-1 Offerta DHCP ricevuta su HOST-1 Richiesta inviata da HOST-1 Richiesta su FOGLIA-1

Richiesta sul dorso	
Richiesta su LEAF-2-vPC	
Richiesta ricevuta sul server DHCP	
Invio ACK dal server DHCP	
ACK su LEAF-2-vPC	
ACK sul DORSO	
ACK su FOGLIA-1	
ACK su HOST-1	
nformazioni correlate	

Introduzione

In questo documento viene descritto come configurare e risolvere i problemi relativi a DHCP in un fabric VxLAN con switch Nexus 9000.

Prerequisiti

Requisiti

Cisco raccomanda la conoscenza dei seguenti argomenti:

- Software Nexus NX-OS.
- Virtual Port Channel (vPC).
- VxLAN BGP L2VPN VPN
- IPv4 famiglia di indirizzi BGP
- OSPF
- PIM multicast (modalità sparse)
- DHCP

Componenti usati

Le informazioni fornite in questo documento si basano sulle seguenti versioni software e hardware:

- Cisco Nexus 9000 con Cisco NX-OS.
 - N9K-C93180YC-EX
 - N9K-C93180YC-FX
 - NX-OS 10.3(4a)
- Windows Server 2022 Data Center

Le informazioni discusse in questo documento fanno riferimento a dispositivi usati in uno specifico ambiente di emulazione. Su tutti i dispositivi menzionati nel documento la configurazione è stata ripristinata ai valori predefiniti. Se la rete è operativa, valutare attentamente eventuali conseguenze derivanti dall'uso dei comandi.



Nota: per qualsiasi domanda sulla configurazione e sull'integrabilità di software o hardware di terze parti, non è previsto il supporto Cisco. L'uso di strumenti di terze parti è il modo migliore per dimostrare al cliente la configurazione e il funzionamento dell'apparecchiatura Cisco.

Premesse

Configurazione della sovrapposizione e della sovrapposizione per VxLAN in laboratorio



Diagramma fabric VxLAN in laboratorio

- DORSO:
 - Questo switch Nexus invia pacchetti DHCP (Discover, Offre, Request, Ack) senza essere decapsulato in questo scenario. Viene utilizzata solo l'intestazione esterna.
 - Funge da punto di routing centrale nel fabric di rete.
 - Responsabile dell'interconnessione di tutti gli interruttori LEAF e della semplificazione del flusso di dati tra di essi.
 - Partecipa a BGP per distribuire le route EVPN agli switch LEAF.
 - Esegue il routing IP e può instradare il traffico tra subnet diverse o segmenti VxLAN guardando le intestazioni IP esterne.
 - Separa la rete sovrapposta (VxLAN) dalla rete fisica sottostante.
 - Gestisce la sovrapposizione con i protocolli di routing IP tradizionali, mentre la sovrapposizione è gestita da VxLAN con BGP EVPN, fornendo un'architettura di rete scalabile e flessibile.
- FOGLIA-1:
 - Gli switch LEAF offrono connettività fisica per endpoint quali server, dispositivi di storage e altri accessori di rete.
 - Gli switch LEAF svolgono la funzione di VTEP, ossia incapsulano e decapsulano i pacchetti VxLAN.
 - In questo scenario, HOST#1 effettua la richiesta dell'indirizzo IP.
 - LEAF-1 è responsabile dell'incapsulamento dei pacchetti DCHP nell'intestazione VxLAN.
 - L'HOST 1 riceve i pacchetti DCHP in modo trasparente come Ethernet classico.
- LEAF-1-vPC e LEAF-2-vPC:
 - Gli switch LEAF partecipano al control plane EVPN eseguendo BGP e scambiando informazioni sulla route. Ciò consente la distribuzione delle informazioni sugli indirizzi

MAC e IP, garantendo che il traffico possa essere indirizzato in modo efficiente attraverso il fabric VxLAN.

- In questo scenario, il server DHCP viene associato alla VLAN 10 con il VNI 10101 e all'HOST 1. Questo significa che è solo un bridging VxLAN.
- Se il server DHCP è stato associato a un VNI diverso da HOST#1, un L3VNI sarebbe strettamente necessario per il routing. È necessario creare il VNI di origine e di destinazione.
- Il server DHCP riceve i pacchetti DCHP in modo trasparente come Ethernet classico.
- Il traffico BUM viene ricevuto da entrambi gli switch Nexus in vPC, ma solo lo switch Nexus primario operativo in vPC invia il traffico. Lo switch Nexus secondario scarta il traffico. In questo scenario, LEAF-1-vPC è operativo primario.
- L'uso delle infra-vlan è obbligatorio perché se l'interfaccia su LEAF-2-vPC su SPINE si interrompe, i pacchetti DCHP non possono essere inviati. Per inviare il traffico incapsulato VxLAN a LEAF-1-vPC, è necessaria questa VLAN di backup. In questo modo LEAF-1-vPC potrebbe inviare pacchetti DCHP a SPINE.
- · ACCESSO N9K:
 - Questo switch Nexus fornisce connettività solo a entrambi i sistemi Leafs utilizzando un canale della porta vPC a scopo di ridondanza verso HOST#2

DORSO

```
nv overlay evpn
feature ospf
feature bgp
feature pim
feature netconf
feature nv overlay
ip pim rp-address 192.168.11.11 group-list 224.10.10.0/24
ip pim ssm range 232.0.0/8
ip pim anycast-rp 192.168.11.11 192.168.0.11
ip prefix-list direct_routes seq 5 permit 10.104.11.0/30 le 32
route-map redistribution permit 10
 match ip address prefix-list direct_routes
interface Ethernet1/1
 speed 1000
 ip address 10.104.11.1/30
 ip ospf network point-to-point
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
 no shutdown
interface Ethernet1/2
 ip address 10.102.11.1/30
 ip ospf network point-to-point
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
 no shutdown
interface Ethernet1/3
```

```
speed 1000
 ip address 10.103.11.1/30
 ip ospf network point-to-point
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
 no shutdown
interface loopback0
 description ANYCAST-RP
 ip address 192.168.0.11/32
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
interface loopback1
 description ANYCAST-RP-CANDIDATE
 ip address 192.168.11.11/32
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
router ospf 1
router bgp 65000
 neighbor 192.168.3.3
    remote-as 65000
    update-source loopback0
    address-family 12vpn evpn
      send-community
      send-community extended
      route-reflector-client
 neighbor 192.168.4.4
    remote-as 65000
    update-source loopback0
    address-family 12vpn evpn
      send-community
      send-community extended
      route-reflector-client
 neighbor 192.168.5.5
    remote-as 65000
    update-source loopback0
    address-family 12vpn evpn
      send-community
      send-community extended
      route-reflector-client
```

FOGLIA-1

nv overlay evpn feature ospf feature bgp feature pim feature interface-vlan feature vn-segment-vlan-based feature dhcp feature nv overlay

fabric forwarding anycast-gateway-mac 0000.0a0a.0a0a

ip pim rp-address 192.168.11.11 group-list 224.10.10.0/24 ip pim ssm range 232.0.0/8 vlan 1,10,20,300 vlan 10 vn-segment 101010 vlan 20 vn-segment 202020 vlan 300 vn-segment 303030 spanning-tree vlan 10 priority 4096 ip prefix-list host_subnets seq 5 permit 10.10.10.0/24 le 32 ip prefix-list host_subnets seq 10 permit 192.168.20.0/24 le 32 ip prefix-list host_subnets seq 15 permit 172.16.10.8/32 route-map direct_routes_tenant-a permit 10 match ip address prefix-list host_subnets vrf context tenant-a vni 303030 rd auto address-family ipv4 unicast route-target both auto route-target both auto evpn interface Vlan10 no shutdown vrf member tenant-a no ip redirects ip address 10.10.10.1/24 no ipv6 redirects fabric forwarding mode anycast-gateway ip dhcp relay address 10.10.10.150 ip dhcp relay source-interface loopback100 interface Vlan20 no shutdown vrf member tenant-a no ip redirects ip address 192.168.20.1/24 no ipv6 redirects fabric forwarding mode anycast-gateway interface Vlan300 no shutdown vrf member tenant-a no ip redirects ip forward no ipv6 redirects interface nvel no shutdown host-reachability protocol bgp source-interface loopback0 member vni 101010 suppress-arp mcast-group 224.10.10.10 member vni 202020 suppress-arp mcast-group 224.10.10.10 member vni 303030 associate-vrf

```
interface Ethernet1/1
 ip address 10.104.11.2/30
 ip ospf network point-to-point
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
 no shutdown
interface loopback0
 description UNDERLAY-VERIFICATION
 ip address 192.168.5.5/32
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
interface loopback100
 vrf member tenant-a
 ip address 172.16.10.8/32
router ospf 1
router bgp 65000
 address-family ipv4 unicast
 neighbor 192.168.0.11
    remote-as 65000
    update-source loopback0
    address-family 12vpn evpn
      send-community
      send-community extended
 vrf tenant-a
    address-family ipv4 unicast
      redistribute direct route-map direct_routes_tenant-a
evpn
 vni 101010 12
    rd auto
    route-target import auto
    route-target export auto
 vni 202020 12
    rd auto
    route-target import auto
    route-target export auto
```

LEAF-1-vPC

nv overlay evpn feature ospf feature bgp feature pim feature interface-vlan feature vn-segment-vlan-based feature lacp feature dhcp feature vpc feature nv overlay

fabric forwarding anycast-gateway-mac 0000.0a0a.0a0a

ip pim rp-address 192.168.11.11 group-list 224.10.10.0/24

ip pim ssm range 232.0.0.0/8 vlan 1,10,300,777 vlan 10 vn-segment 101010 vlan 300 vn-segment 303030 vlan 777 name BACKUP_VLAN_ROUTING_NVE_INFRA spanning-tree vlan 1,10,300 hello-time 4 ip prefix-list host_subnets seq 5 permit 10.10.10.0/24 le 32 ip prefix-list host_subnets seq 15 permit 172.16.10.9/32 route-map direct_routes_tenant-a permit 10 match ip address prefix-list host_subnets vrf context tenant-a vni 303030 rd auto address-family ipv4 unicast route-target both auto route-target both auto evpn system nve infra-vlans 777 vpc domain 1 peer-switch peer-keepalive destination 10.88.238.195 peer-gateway layer3 peer-router ip arp synchronize interface Ethernet1/3 switchport switchport mode trunk switchport trunk allowed vlan 1,10,20 channel-group 10 mode active no shutdown interface Ethernet1/19 switchport switchport mode trunk channel-group 1 mode active no shutdown interface port-channel1 switchport switchport mode trunk spanning-tree port type network vpc peer-link interface port-channel10 switchport switchport mode trunk switchport trunk allowed vlan 1,10 vpc 10 interface mgmt0 vrf member management ip address 10.88.238.194/29 interface loopback0 description UNDERLAY-VERIFICATION

```
ip address 192.168.3.3/32
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
interface loopback1
 description OVERLAY-NVE
 ip address 192.168.13.1/32
 ip address 192.168.13.254/32 secondary
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
interface loopback10
 vrf member tenant-a
 ip address 172.16.10.1/32
interface loopback100
 vrf member tenant-a
 ip address 172.16.10.9/32
interface Vlan10
 no shutdown
 vrf member tenant-a
 no ip redirects
 ip address 10.10.10.1/24
 no ipv6 redirects
 fabric forwarding mode anycast-gateway
 ip dhcp relay address 10.10.10.150
 ip dhcp relay source-interface loopback100
interface Vlan300
 no shutdown
 vrf member tenant-a
 no ip redirects
 ip forward
 no ipv6 redirects
interface Vlan777
 description BACKUP_UNDERLAY_INFRA-VLAN
 no shutdown
 no ip redirects
 ip address 10.255.77.1/30
 no ipv6 redirects
 ip ospf network point-to-point
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
interface Ethernet1/2
 ip address 10.102.11.2/30
 ip ospf network point-to-point
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
 no shutdown
interface nve1
 no shutdown
 host-reachability protocol bgp
 advertise virtual-rmac
 source-interface loopback1
 member vni 101010
    suppress-arp
    mcast-group 224.10.10.10
 member vni 303030 associate-vrf
```

router ospf 1 router bgp 65000 address-family ipv4 unicast address-family 12vpn evpn advertise-pip neighbor 192.168.0.11 remote-as 65000 update-source loopback0 address-family 12vpn evpn send-community send-community extended neighbor 192.168.88.2 remote-as 65000 description OVERLAY_BACKUP update-source Vlan888 address-family 12vpn evpn send-community send-community extended vrf tenant-a address-family ipv4 unicast redistribute direct route-map direct_routes_tenant-a evpn vni 101010 12 rd auto route-target import auto route-target export auto vni 202020 12 rd auto route-target import auto route-target export auto

LEAF-2-vPC

nv overlay evpn feature ospf feature bgp feature pim feature interface-vlan feature vn-segment-vlan-based feature lacp feature dhcp feature vpc feature nv overlay fabric forwarding anycast-gateway-mac 0000.0a0a.0a0a ip pim rp-address 192.168.11.11 group-list 224.10.10.0/24 ip pim ssm range 232.0.0/8 vlan 1,10,20,300,777 vlan 10 vn-segment 101010 vlan 20 vn-segment 202020 vlan 300

```
vn-segment 303030
vlan 777
 name BACKUP_VLAN_ROUTING_NVE_INFRA
spanning-tree vlan 1,10,20,300 hello-time 4
ip prefix-list host_subnets seq 5 permit 10.10.10.0/24 le 32
ip prefix-list host_subnets seq 10 permit 192.168.20.0/24 le 32
ip prefix-list host_subnets seq 15 permit 172.16.10.10/32
route-map direct_routes_tenant-a permit 10
 match ip address prefix-list host_subnets
vrf context tenant-a
 vni 303030
  rd auto
 address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn
system nve infra-vlans 777
vpc domain 1
 peer-switch
 peer-keepalive destination 10.88.238.194
 peer-gateway
  layer3 peer-router
 ip arp synchronize
interface Ethernet1/1
 ip address 10.103.11.2/30
 ip ospf network point-to-point
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
 no shutdown
interface Ethernet1/19
 switchport
 switchport mode trunk
 channel-group 1 mode active
 no shutdown
interface port-channel1
 switchport
 switchport mode trunk
 spanning-tree port type network
 vpc peer-link
interface port-channel10
 switchport
 switchport mode trunk
 switchport trunk allowed vlan 1,10,20
 vpc 10
interface mgmt0
 vrf member management
 ip address 10.88.238.195/29
interface loopback0
 description UNDERLAY-VERIFICATION
 ip address 192.168.4.4/32
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
```

```
interface loopback1
 description OVERLAY-NVE
 ip address 192.168.13.2/32
 ip address 192.168.13.254/32 secondary
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
interface loopback10
 vrf member tenant-a
 ip address 172.16.10.2/32
interface loopback100
 vrf member tenant-a
 ip address 172.16.10.10/32
interface Vlan10
 no shutdown
 vrf member tenant-a
 no ip redirects
 ip address 10.10.10.1/24
 no ipv6 redirects
 fabric forwarding mode anycast-gateway
 ip dhcp relay address 10.10.10.150
 ip dhcp relay source-interface loopback100
interface Vlan20
 no shutdown
 vrf member tenant-a
 no ip redirects
 ip address 192.168.20.1/24
 no ipv6 redirects
 fabric forwarding mode anycast-gateway
interface Vlan300
 no shutdown
 vrf member tenant-a
 no ip redirects
 ip forward
 no ipv6 redirects
interface Vlan777
 description BACKUP_UNDERLAY_INFRA-VLAN
 no shutdown
 no ip redirects
 ip address 10.255.77.2/30
 no ipv6 redirects
 ip ospf network point-to-point
 ip router ospf 1 area 0.0.0.0
 ip pim sparse-mode
interface nvel
 no shutdown
 host-reachability protocol bgp
 advertise virtual-rmac
 source-interface loopback1
 member vni 101010
    suppress-arp
   mcast-group 224.10.10.10
 member vni 202020
    suppress-arp
    mcast-group 224.10.10.10
 member vni 303030 associate-vrf
```

router ospf 1 router bgp 65000 address-family ipv4 unicast address-family 12vpn evpn advertise-pip neighbor 192.168.0.11 remote-as 65000 update-source loopback0 address-family 12vpn evpn send-community send-community extended neighbor 192.168.88.1 remote-as 65000 description OVERLAY_BACKUP update-source Vlan888 address-family 12vpn evpn send-community send-community extended vrf tenant-a address-family ipv4 unicast redistribute direct route-map direct_routes_tenant-a evpn vni 101010 12 rd auto route-target import auto route-target export auto vni 202020 12 rd auto route-target import auto route-target export auto

N9K-ACCESS

feature lacp

vlan 1,10

interface port-channel10
 switchport
 switchport mode trunk

interface Ethernet1/11
 switchport
 switchport access vlan 10
 no shutdown

interface Ethernet1/45
 switchport
 switchport mode trunk
 channel-group 10 mode active
 no shutdown

interface Ethernet1/46
 switchport
 switchport mode trunk

channel-group 10 mode active no shutdown

Configurazione DHCP sugli switch Nexus

FOGLIA-1

Passaggio 1. Attivare la funzionalità DCHP.

LEAF-1(config)# feature dhcp



Nota: il server DHCP e il servizio di comando dell'agente di inoltro dhcp, ip dhcp relay e ipv6 dhcp relay sono abilitati per impostazione predefinita da NX-OS 7.x.

Passaggio 2. Applicare il comando ip dhcp relay information option.

LEAF-1(config)# ip dhcp relay information option



Nota: questo comando consente all'agente di inoltro DHCP di inserire e rimuovere le informazioni dell'opzione 82 sui pacchetti inoltrati.

Passaggio 3. Applicare il comando ip dhcp relay information option vpn.

LEAF-1(config)# ip dhcp relay information option vpn



Nota: questo comando abilita le richieste di inoltro DHCP che arrivano su VRF diversi a cui appartiene il server DHCP.

Passaggio 4. Applicare il comando "ip dhcp relay address [ip address of DCHP server]".



Nota: nell'esempio, l'indirizzo IP del server DHCP è 10.10.150.

LEAF-1(config)# interface vlan 10
LEAF-1(config-if)# ip dhcp relay address 10.10.10.150

Passaggio 5. Applicare il comando "ip dhcp relay source-interface [unique loopback]".



Nota: questo comando configura l'indirizzo IP di origine per l'agente di inoltro DHCP per gestire Discover, Offre, Request e ACK, per la comunicazione unicast che l'agente di inoltro DHCP utilizza come indirizzo IP di origine dell'agente di inoltro DHCP. Questa operazione non è desiderata perché l'indirizzo IP è condiviso da più VTEP ed è possibile che i pacchetti DHCP rimangano bloccati. Per evitare ciò, è necessario un indirizzo IP univoco (che utilizzi un'interfaccia di loopback) per distinguere ciascun VTEP.

LEAF-1(config)# interface vlan 10
LEAF-1(config-if)# ip dhcp relay source-interface loopback100

Passaggio 6. Nel tenant corrispondente VRF all'interno di BGP, ridistribuzione diretta della route con un prefisso-elenco e una route-map che include l'indirizzo IP dell'interfaccia di loopback.



Nota: questa interfaccia di loopback appartiene al tenant di SVI.

```
LEAF-1(config)# show running-config interface loopback 100
interface loopback100
vrf member tenant-a
ip address 172.16.10.8/32
LEAF-1(config)# ip prefix-list host_subnets seq 15 permit 172.16.10.8/32
LEAF-1(config)# route-map direct_routes_tenant-a permit 10
LEAF-1(config-route-map)# match ip address prefix-list host_subnets
LEAF-1(config-route-map)# router bgp 65000
LEAF-1(config-router)# vrf tenant-a
LEAF-1(config-router-vrf)# address-family ipv4 unicast
LEAF-1(config-router-vrf-af)# redistribute direct route-map direct_routes_tenant-a
```

Passaggio 7. Verificare che l'indirizzo IP dell'interfaccia di loopback venga annunciato in BGP L2VPN VPN agli Spine con il comando show bgp l2vpn evpn [loopback IP] vrf [tenant vrf].

LEAF-1(config)# show bgp 12vpn evpn 172.16.10.8 vrf tenant-a BGP routing table information for VRF default, address family L2VPN EVPN Route Distinguisher: 192.168.5.5:4 (L3VNI 303030) BGP routing table entry for [5]:[0]:[32]:[172.16.10.8]/224, version 421 Paths: (1 available, best #1) Flags: (0x000002) (high32 0000000) on xmit-list, is not in 12rib/evpn Advertised path-id 1 Path type: local, path is valid, is best path, no labeled nexthop Gateway IP: 0.0.0.0 AS-Path: NONE, path locally originated 192.168.5.5 (metric 0) from 0.0.0.0 (192.168.5.5) Origin incomplete, MED 0, localpref 100, weight 32768 Received label 303030 Extcommunity: RT:65000:303030 ENCAP:8 Router MAC:707d.b9b8.4daf Path-id 1 advertised to peers: 192.168.0.11 <<<< Spine

Passaggio 8. Verificare che l'indirizzo IP dell'interfaccia di loopback venga inserito nell'EVPN BGP L2VPN in cui si trova il server DHCP.



Nota: se vi sono switch Nexus in vPC, verificare che entrambi conoscano l'indirizzo IP dell'interfaccia di loopback in BGP L2VPN EVPN.

```
LEAF-1# show bgp 12vpn evpn 172.16.10.8
BGP routing table information for VRF default, address family L2VPN EVPN
Route Distinguisher: 192.168.5.5:4
BGP routing table entry for [5]:[0]:[32]:[172.16.10.8]/224, version 754
Paths: (1 available, best #1)
Flags: (0x000002) (high32 0000000) on xmit-list, is not in l2rib/evpn, is not in HW
 Advertised path-id 1
 Path type: internal, path is valid, is best path, no labeled nexthop
             Imported to 2 destination(s)
             Imported paths list: tenant-a L3-303030
 Gateway IP: 0.0.0.0
 AS-Path: NONE, path sourced internal to AS
    192.168.5.5 (metric 45) from 192.168.0.11 (192.168.0.11)
     Origin incomplete, MED 0, localpref 100, weight 0
     Received label 303030
     Extcommunity: RT:65000:303030 ENCAP:8 Router MAC:707d.b9b8.4daf
     Originator: 192.168.5.5 Cluster list: 192.168.0.11
```

Path-id 1 not advertised to any peer

Route Distinguisher: 192.168.3.3:4 (L3VNI 303030) BGP routing table entry for [5]:[0]:[0]:[32]:[172.16.10.8]/224, version 761 Paths: (1 available, best #1) Flags: (0x000002) (high32 00000000) on xmit-list, is not in l2rib/evpn, is not in HW Advertised path-id 1 Path type: internal, path is valid, is best path, no labeled nexthop Imported from 192.168.5.5:4:[5]:[0]:[0]:[32]:[172.16.10.8]/224 Gateway IP: 0.0.0.0 AS-Path: NONE, path sourced internal to AS 192.168.5.5 (metric 45) from 192.168.0.11 (192.168.0.11) Origin incomplete, MED 0, localpref 100, weight 0 Received label 303030 Extcommunity: RT:65000:303030 ENCAP:8 Router MAC:707d.b9b8.4daf Originator: 192.168.5.5 Cluster list: 192.168.0.11

Path-id 1 not advertised to any peer

Passaggio 9. Verificare che esista una route per il server DHCP nel tenant di origine con il comando show ip route [DHCP server IP] vrf [tenant vrf].



Nota: la voce della route da utilizzare deve essere da VxLAN a VRF predefinita. Se non è disponibile alcuna route, verificare che il VTEP conosca localmente l'indirizzo IP del server DHCP.

```
LEAF-1# show running-config interface vlan 10
interface Vlan10
no shutdown
vrf member tenant-a <<<< source tenant
no ip redirects
ip address 10.10.10.1/24
no ipv6 redirects
fabric forwarding mode anycast-gateway
ip dhcp relay address 10.10.10.150 <<<< DHCP server
ip dhcp relay source-interface loopback100
LEAF-1# show ip route 10.10.10.150 vrf tenant-a
10.10.150/32, ubest/mbest: 1/0
    *via 192.168.13.254%default, [200/0], 2w0d, bgp-65000, internal, tag 65000, segid: 303030 tunnelid:</pre>
```

Passaggio 10. Verificare che l'indirizzo IP del server DHCP sia raggiungibile utilizzando l'interfaccia di loopback e il VRF corrispondente come origine VRF con il comando ping [DHCP server IP] source-interface loopback [x] vrf [tenant vrf].

LEAF-1# ping 10.10.10.150 source-interface loopback 100 vrf tenant-a PING 10.10.10.150 (10.10.10.150): 56 data bytes 64 bytes from 10.10.10.150: icmp_seq=0 ttl=126 time=1.262 ms 64 bytes from 10.10.10.150: icmp_seq=1 ttl=126 time=0.833 ms 64 bytes from 10.10.10.150: icmp_seq=2 ttl=126 time=0.808 ms 64 bytes from 10.10.10.150: icmp_seq=3 ttl=126 time=0.795 ms 64 bytes from 10.10.10.150: icmp_seq=4 ttl=126 time=0.78 ms --- 10.10.10.150 ping statistics ---5 packets transmitted, 5 packets received, 0.00% packet loss

Passaggio 11. Verificare lo stato dell'agente di inoltro DHCP.

LEAF-1# show ip dhcp status Current CLI Operation: show ip dhcp status Last CLI Operation: DME: ip dhcp relay information option enable Last CLI Operation Status: SUCCESS

Passaggio 12. Verificare l'opzione 82, ad esempio vpn option e l'indirizzo IP corretto del relay nell'agente di inoltro.

LEAF-1# show ip dhcp relay DHCP relay service is enabled <<<<< Insertion of option 82 is enabled <<<<< Insertion of option 82 customize circuitid is disabled TLV format in CircuitId and RemoteId suboptions is enabled Insertion of VPN suboptions is enabled <<<<<< Insertion of cisco suboptions is disabled Global smart-relay is disabled Relay Trusted functionality is disabled Relay Trusted Port is Globally disabled V4 Relay Source Address HSRP is Globally disabled Server-ID-override-disable is disabled

Smart-relay is enabled on the following interfaces:

Subnet-broadcast is enabled on the following interfaces:

Relay Trusted Port is enabled on the following interfaces:

Relay Source Address HSRP is enabled on the following interfaces:

Helper addresses are configured on the following interfaces:InterfaceRelay AddressVRF Name------------------Vlan1010.10.10.150<<<<<<<<<>><<<<>><<<<>><</td>

Passaggio 13. Verificare le statistiche dei pacchetti elaborati e inoltrati.

LEAF-1# show ip dhcp global statistics Packets processed 1297177 Packets received through cfsoe 0 Packets forwarded 1297175 Packets forwarded on cfsoe 0 Total packets dropped 0 Packets dropped from untrusted ports 0 Packets dropped due to MAC address check failure 0 Packets dropped due to Option 82 insertion failure 0 Packets dropped due to o/p intf unknown 0 Packets dropped which were unknown 0 Packets dropped due to no trusted ports 0 Packets dropped due to dhcp relay not enabled 0 Packets dropped due to no binding entry 0 Packets dropped due to interface error/no interface 0 Packets dropped due to max hops exceeded 0 Packets dropped due to Queue full 0

Passaggio 14. Verificare le statistiche dei pacchetti relay.

Message Type	Rx	Tx		Drops	
Discover	260521	260520		0	
Offer	289330	289330		0	
Request(*)	267162	267161		0	
Ack	8322	8322		0	
Release(*)	181121	181121		0	
Decline	1	1		0	
Inform(*)	0	0		0	
Nack	289280	289280		0	
Total	1295737	1295735		0	
DHCP 13 FWD:					
Total Packets	Received			0	
Total Packets	Forwarded			0	
Total Packets	Dropped		:	0	
Non DHCP:					
Total Packets	Received		:	0	
Total Packets	Forwarded		:	0	

LEAF-1# show ip dhcp relay statistics

Total Packets Dropped :	0				
DROP:					
DHCP Relay not enabled :	0				
Invalid DHCP message type :	0				
Interface error :	0				
Tx failure towards server :	0				
Tx failure towards client :	0				
Unknown output interface :	0				
Unknown vrf or interface for server :	0				
Max hops exceeded :	0				
Option 82 validation failed :	0				
Packet Malformed :	0				
DHCP Request dropped on MCT :	0				
Relay Trusted port not configured :	0				
* - These counters will show correct value when	switch				
receives DHCP request packet with destination ip as broadcast					
address. If request is unicast it will be HW switc	ched				

DHCP LEAF-1-vPC

Passaggio 1. Attivare la funzionalità DCHP.

LEAF-1-VPC(config)#feature dhcp



Nota: il server DHCP e il servizio di comando dell'agente di inoltro dhcp, ip dhcp relay e ipv6 dhcp relay sono abilitati per impostazione predefinita da NX-OS 7.x.

Passaggio 2. Applicare il comando ip dhcp relay information option.

LEAF-1-VPC(config)#ip dhcp relay information option



Nota: questo comando consente all'agente di inoltro DHCP di inserire e rimuovere le informazioni dell'opzione 82 sui pacchetti inoltrati.

Passaggio 3. Applicare il comando "ip dhcp relay information option vpn".

LEAF-1-VPC(config)# ip dhcp relay information option vpn



Nota: questo comando abilita le richieste di inoltro DHCP che arrivano su VRF diversi a cui appartiene il server DHCP.

Passaggio 4. Applicare il comando ip dhcp relay address [ip address of DCHP server].



Nota: nell'esempio, l'indirizzo IP del server DHCP è 10.10.150.

LEAF-1-VPC(config)#interface vlan 10 LEAF-1-VPC(config-if)#ip dhcp relay address 10.10.10.150

Passaggio 5. Applicare il comando "ip dhcp relay source-interface [unique loopback]".



Nota: questo comando configura l'indirizzo IP di origine per l'agente di inoltro DHCP per gestire Discover, Offre, Request e ACK, per la comunicazione unicast che l'agente di inoltro DHCP utilizza come indirizzo IP di origine dell'agente di inoltro DHCP. Questa operazione non è desiderata perché l'indirizzo IP è condiviso da più VTEP ed è possibile che i pacchetti DHCP rimangano bloccati. Per evitare ciò, è necessario un indirizzo IP univoco (che utilizzi un'interfaccia di loopback) per distinguere ciascun VTEP.

LEAF-1-VPC(config)#interface vlan 10
LEAF-1-VPC(config-if)# ip dhcp relay source-interface loopback100

Passaggio 6. Nel tenant corrispondente VRF all'interno di BGP, ridistribuzione diretta della route con un prefisso-elenco e una route-map che include l'indirizzo IP dell'interfaccia di loopback.



Nota: questa interfaccia di loopback appartiene al tenant di SVI.

```
LEAF-1-VPC(config)# show running-config interface loopback 100
interface loopback100
vrf member tenant-a
ip address 172.16.10.9/32
LEAF-1-VPC(config)# ip prefix-list host_subnets seq 15 permit 172.16.10.9/32
LEAF-1-VPC(config)# route-map direct_routes_tenant-a permit 10
LEAF-1-VPC(config-route-map)# match ip address prefix-list host_subnets
LEAF-1-VPC(config-route-map)# router bgp 65000
LEAF-1-VPC(config-router)# vrf tenant-a
LEAF-1-VPC(config-router)# vrf tenant-a
LEAF-1-VPC(config-router-vrf)# address-family ipv4 unicast
LEAF-1-VPC(config-router-vrf-af)# redistribute direct route-map direct_routes_tenant-a
```

Passaggio 7. Verificare che l'indirizzo IP dell'interfaccia di loopback venga annunciato in BGP L2VPN VPN agli Spine con il comando show bgp l2vpn evpn [loopback IP] vrf [tenant vrf].

LEAF-1-VPC# show bgp 12vpn evpn 172.16.10.9 vrf tenant-a BGP routing table information for VRF default, address family L2VPN EVPN Route Distinguisher: 192.168.3.3:4 (L3VNI 303030) BGP routing table entry for [5]:[0]:[32]:[172.16.10.9]/224, version 637 Paths: (1 available, best #1) Flags: (0x000002) (high32 00000000) on xmit-list, is not in 12rib/evpn Advertised path-id 1 Path type: local, path is valid, is best path, no labeled nexthop Gateway IP: 0.0.0.0 AS-Path: NONE, path locally originated 192.168.13.1 (metric 0) from 0.0.0.0 (192.168.3.3) Origin incomplete, MED 0, localpref 100, weight 32768 Received label 303030 Extcommunity: RT:65000:303030 ENCAP:8 Router MAC:6026.aa85.9887 Path-id 1 advertised to peers: 192.168.0.11

Passaggio 8. Verificare che l'indirizzo IP dell'interfaccia di loopback venga inserito nell'EVPN BGP L2VPN in cui si trova il server DHCP.



Nota: se vi sono switch Nexus in vPC, verificare che entrambi conoscano l'indirizzo IP dell'interfaccia di loopback in BGP L2VPN EVPN.

LEAF-1-VPC# show bgp 12vpn evpn 172.16.10.9 BGP routing table information for VRF default, address family L2VPN EVPN Route Distinguisher: 192.168.3.3:4 (L3VNI 303030) BGP routing table entry for [5]:[0]:[32]:[172.16.10.9]/224, version 637 Paths: (1 available, best #1) Flags: (0x000002) (high32 0000000) on xmit-list, is not in 12rib/evpn Advertised path-id 1 Path type: local, path is valid, is best path, no labeled nexthop Gateway IP: 0.0.0.0 AS-Path: NONE, path locally originated 192.168.13.1 (metric 0) from 0.0.0.0 (192.168.3.3) Origin incomplete, MED 0, localpref 100, weight 32768 Received label 303030 Extcommunity: RT:65000:303030 ENCAP:8 Router MAC:6026.aa85.9887 Path-id 1 advertised to peers: 192.168.0.11

Passaggio 9. Verificare che nel tenant di origine sia presente una route per il server DHCP con il comando show ip route [DHCP server IP] vrf[tenant vrf].



Nota: la voce della route da utilizzare deve essere da VxLAN a VRF predefinita. Se non è disponibile alcuna route, verificare che il VTEP conosca localmente l'indirizzo IP del server DHCP.

LEAF-1-VPC# show running-config interface vlan 10 interface Vlan10 no shutdown vrf member tenant-a <<<< source tenant no ip redirects ip address 10.10.10.1/24 no ipv6 redirects fabric forwarding mode anycast-gateway ip dhcp relay address 10.10.10.150 ip dhcp relay source-interface loopback100
LEAF-1-VPC# show ip route 10.10.10.150 vrf tenant-a 10.10.10.150/32, ubest/mbest: 1/0, attached *via 10.10.10.150, Vlan10, [190/0], 6d07h, hmm

Passaggio 10. Verificare che l'indirizzo IP del server DHCP sia raggiungibile utilizzando l'interfaccia di loopback e il VRF corrispondente come origine VRF con il comando ping [DHCP server IP] source-interface loopback [x] vrf [tenvrf].

LEAF-1-VPC# ping 10.10.10.150 source-interface loopback 100 vrf tenant-a PING 10.10.10.150 (10.10.10.150): 56 data bytes 64 bytes from 10.10.10.150: icmp_seq=0 ttl=126 time=0.965 ms 64 bytes from 10.10.10.150: icmp_seq=1 ttl=126 time=0.57 ms 64 bytes from 10.10.10.150: icmp_seq=2 ttl=126 time=0.488 ms 64 bytes from 10.10.10.150: icmp_seq=3 ttl=126 time=0.524 ms 64 bytes from 10.10.10.150: icmp_seq=4 ttl=126 time=0.502 ms

--- 10.10.10.150 ping statistics ---

Passaggio 11. Verificare lo stato dell'agente di inoltro DHCP.

LEAF-1-VPC# show ip dhcp status Current CLI Operation: show ip dhcp status Last CLI Operation: DME: ip dhcp relay information option vpn enable Last CLI Operation Status: SUCCESS

Passaggio 12. Verificare l'opzione 82, ad esempio vpn option e l'indirizzo IP corretto del relay nell'agente di inoltro.

LEAF-1-VPC# show ip dhcp relay DHCP relay service is enabled <<<<< Insertion of option 82 is enabled <<<<< Insertion of option 82 customize circuitid is disabled TLV format in CircuitId and RemoteId suboptions is enabled Insertion of VPN suboptions is enabled <<<<<< Insertion of cisco suboptions is disabled Global smart-relay is disabled Relay Trusted functionality is disabled Relay Trusted Port is Globally disabled V4 Relay Source Address HSRP is Globally disabled Server-ID-override-disable is disabled

Smart-relay is enabled on the following interfaces:

Subnet-broadcast is enabled on the following interfaces:

Relay Trusted Port is enabled on the following interfaces:

Relay Source Address HSRP is enabled on the following interfaces:

Helper addresses are configured on the following interfaces:InterfaceRelay AddressVRF Name------------------Vlan1010.10.10.150<<<<<<<</td>

Passaggio 13. Verificare le statistiche dei pacchetti elaborati e inoltrati.

LEAF-1-VPC# show ip dhcp global statistics Packets processed 263162 Packets received through cfsoe 0 Packets forwarded 263161 Packets forwarded on cfsoe 0 Total packets dropped 0 Packets dropped from untrusted ports 0 Packets dropped due to MAC address check failure 0 Packets dropped due to Option 82 insertion failure 0 Packets dropped due to o/p intf unknown 0 Packets dropped which were unknown 0 Packets dropped due to no trusted ports O Packets dropped due to dhcp relay not enabled 0 Packets dropped due to no binding entry 0 Packets dropped due to interface error/no interface 0 Packets dropped due to max hops exceeded 0 Packets dropped due to Queue full 0

Passaggio 14. Verificare le statistiche dei pacchetti relay.

Message Type	Rx	Тх	Drops	
Discover	8	7	0	
Offer	29304	29304	0	
Request(*)	5029	5029	0	
Ack	6535	6535	0	
Release(*)	191482	191482	0	
Decline	0	0	0	
Inform(*)	3	3	0	
Nack	29281	29281	0	
Total	261642	261641	0	

LEAF-1-VPC# show ip dhcp relay statistics

DHCP L3 FWD: Total Packets Received

0

:

Total Packets Forwarded	:	0
Total Packets Dropped	:	0
Non DHCP:		
Total Packets Received	:	0
Total Packets Forwarded	:	0
Total Packets Dropped	:	0
DROP:		
DHCP Relay not enabled	:	0
Invalid DHCP message type	:	0
Interface error	:	0
Tx failure towards server	:	0
Tx failure towards client	:	0
Unknown output interface	:	0
Unknown vrf or interface for server	:	0
Max hops exceeded	:	0
Option 82 validation failed	:	0
Packet Malformed	:	0
DHCP Request dropped on MCT	:	0
Relay Trusted port not configured	:	0
* - These counters will show correct value whe	n switch	
receives DHCP request packet with destination ip	as broade	cast
address. If request is unicast it will be HW swi	tched	

DHCP LEAF-2-vPC

Passaggio 1. Attivare la funzionalità DCHP.

LEAF-2-VPC(config)# feature dhcp



Nota: il server DHCP e il servizio di comando dell'agente di inoltro dhcp, ip dhcp relay e ipv6 dhcp relay sono abilitati per impostazione predefinita a partire da NX-OS 7.x.

Passaggio 2. Applicare il comando "ip dhcp relay information option".

LEAF-2-VPC(config)# ip dhcp relay information option



Nota: questo comando consente all'agente di inoltro DHCP di inserire e rimuovere le informazioni dell'opzione 82 sui pacchetti inoltrati.

Passaggio 3. Applicare il comando "ip dhcp relay information option vpn".

LEAF-2-VPC(config)# ip dhcp relay information option vpn



Nota: questo comando abilita le richieste di inoltro DHCP che arrivano su VRF diversi a cui appartiene il server DHCP.

Passaggio 4. Applicare il comando "ip dhcp relay address [ip address of DCHP server]".



Nota: nell'esempio, l'indirizzo IP del server DHCP è 10.10.150.

LEAF-2-VPC(config)# interface vlan 10
LEAF-2-VPC(config-if)# ip dhcp relay address 10.10.10.150

Passaggio 5. Applicare il comando "ip dhcp relay source-interface [unique loopback]".



Nota: questo comando configura l'indirizzo IP di origine per l'agente di inoltro DHCP per gestire Discover, Offre, Request e ACK, per la comunicazione unicast che l'agente di inoltro DHCP utilizza come indirizzo IP di origine dell'agente di inoltro DHCP. Questa operazione non è desiderata perché l'indirizzo IP è condiviso da più VTEP ed è possibile che i pacchetti DHCP rimangano bloccati. Per evitare ciò, è necessario un indirizzo IP univoco (che utilizzi un'interfaccia di loopback) per distinguere ciascun VTEP.

LEAF-2-VPC(config)# interface vlan 10 LEAF-2-VPC(config-if)# ip dhcp relay source-interface loopback 100

Passaggio 6. Nel tenant corrispondente VRF all'interno di BGP, ridistribuzione diretta della route con un prefisso-elenco e una route-map che include l'indirizzo IP dell'interfaccia di loopback.



Nota: questa interfaccia di loopback appartiene al tenant di SVI.

```
LEAF-2-VPC(config-if)# show running-config interface loopback 100
interface loopback100
vrf member tenant-a
ip address 172.16.10.10/32
LEAF-2-VPC(config)# ip prefix-list host_subnets seq 15 permit 172.16.10.10/32
LEAF-2-VPC(config)# route-map direct_routes_tenant-a permit 10
LEAF-2-VPC(config-route-map)# match ip address prefix-list host_subnets
LEAF-2-VPC(config-route-map)# router bgp 65000
LEAF-2-VPC(config-router)# vrf tenant-a
LEAF-2-VPC(config-router)# vrf tenant-a
LEAF-2-VPC(config-router-vrf)# address-family ipv4 unicast
LEAF-2-VPC(config-router-vrf-af)# redistribute direct route-map direct_routes_tenant-a
```

Passaggio 7. Verificare che l'indirizzo IP dell'interfaccia di loopback venga annunciato in BGP L2VPN VPN agli Spine con il comando show bgp l2vpn evpn [loopback IP] vrf [tenant vrf].

LEAF-2-VPC(config-if)# show bgp 12vpn evpn 172.16.10.10 vrf tenant-a BGP routing table information for VRF default, address family L2VPN EVPN Route Distinguisher: 192.168.4.4:4 (L3VNI 303030) BGP routing table entry for [5]:[0]:[32]:[172.16.10.10]/224, version 49 5 Paths: (1 available, best #1) Flags: (0x000002) (high32 0000000) on xmit-list, is not in 12rib/evpn Advertised path-id 1 Path type: local, path is valid, is best path, no labeled nexthop Gateway IP: 0.0.0.0 AS-Path: NONE, path locally originated 192.168.13.2 (metric 0) from 0.0.0.0 (192.168.4.4) Origin incomplete, MED 0, localpref 100, weight 32768 Received label 303030 Extcommunity: RT:65000:303030 ENCAP:8 Router MAC:6026.aa85.9587 Path-id 1 advertised to peers: 192.168.0.11 <<<<< Spine

Passaggio 8. Verificare che l'indirizzo IP dell'interfaccia di loopback venga inserito nell'EVPN BGP L2VPN in cui si trova il server DHCP.



Nota: se vi sono switch Nexus in vPC, verificare che entrambi conoscano l'indirizzo IP dell'interfaccia di loopback in BGP L2VPN EVPN.

LEAF-2-VPC(config-if)# show bgp l2vpn evpn 172.16.10.10 BGP routing table information for VRF default, address family L2VPN EVPN Route Distinguisher: 192.168.4.4:4 (L3VNI 303030) BGP routing table entry for [5]:[0]:[0]:[32]:[172.16.10.10]/224, version 49 5 Paths: (1 available, best #1) Flags: (0x000002) (high32 00000000) on xmit-list, is not in l2rib/evpn Advertised path-id 1 Path type: local, path is valid, is best path, no labeled nexthop Gateway IP: 0.0.0.0 AS-Path: NONE, path locally originated 192.168.13.2 (metric 0) from 0.0.0.0 (192.168.4.4) Origin incomplete, MED 0, localpref 100, weight 32768 Received label 303030 Extcommunity: RT:65000:303030 ENCAP:8 Router MAC:6026.aa85.9587

Path-id 1 advertised to peers:

Passaggio 9. Verificare che nel tenant di origine sia presente una route per il server DHCP con il comando show ip route [DHCP server IP] vrf[tenvrf].



Nota: la voce della route da utilizzare deve essere da VxLAN a VRF predefinita. Se non è disponibile alcuna route, verificare che il VTEP conosca localmente l'indirizzo IP del server DHCP.

LEAF-2-VPC(config-if)# show running-config interface vlan 10
interface Vlan10
no shutdown
vrf member tenant-a
no ip redirects
ip address 10.10.10.1/24
no ipv6 redirects
fabric forwarding mode anycast-gateway
ip dhcp relay address 10.10.10.150

ip dhcp relay source-interface loopback100

Passaggio 10. Verificare che l'indirizzo IP del server DHCP sia raggiungibile utilizzando l'interfaccia di loopback e il VRF corrispondente come origine VRF con il comando ping [DHCP server IP] source-interface loopback [x] vrf [tenant vrf].

LEAF-2-VPC(config-if)# ping 10.10.10.150 source-interface loopback 100 vrf tenant-a PING 10.10.10.150 (10.10.10.150): 56 data bytes 64 bytes from 10.10.10.150: icmp_seq=0 ttl=127 time=0.928 ms 64 bytes from 10.10.10.150: icmp_seq=1 ttl=127 time=0.475 ms 64 bytes from 10.10.10.150: icmp_seq=2 ttl=127 time=0.455 ms 64 bytes from 10.10.10.150: icmp_seq=3 ttl=127 time=0.409 ms 64 bytes from 10.10.10.150: icmp_seq=4 ttl=127 time=0.465 ms

```
--- 10.10.10.150 ping statistics ---
```

Passaggio 11. Verificare lo stato dell'agente di inoltro DHCP.

LEAF-2-VPC(config)# show ip dhcp status Current CLI Operation: show ip dhcp status Last CLI Operation: DME: ip dhcp relay information option vpn enable Last CLI Operation Status: SUCCESS

Passaggio 12. Verificare l'opzione 82, ad esempio vpn option e l'indirizzo IP corretto del relay nell'agente di inoltro.

LEAF-2-VPC(config)# show ip dhcp relay DHCP relay service is enabled <<<<<< Insertion of option 82 is enabled <<<<<<> Insertion of option 82 customize circuitid is disabled TLV format in CircuitId and RemoteId suboptions is enabled Insertion of VPN suboptions is enabled <<<<<<> Insertion of cisco suboptions is disabled Global smart-relay is disabled Relay Trusted functionality is disabled Relay Trusted Port is Globally disabled V4 Relay Source Address HSRP is Globally disabled Server-ID-override-disable is disabled

Smart-relay is enabled on the following interfaces:

Subnet-broadcast is enabled on the following interfaces:

Relay Trusted Port is enabled on the following interfaces:

Relay Source Address HSRP is enabled on the following interfaces:

Helper addresses are configured on the following interfaces:InterfaceRelay AddressVRF Name------------------Vlan1010.10.10.150 <<<</td>

Passaggio 13. Verificare le statistiche dei pacchetti elaborati e inoltrati.

LEAF-2-VPC(config)# show ip dhcp global statistics
Packets processed 103030
Packets received through cfsoe 0
Packets forwarded 103030
Packets forwarded on cfsoe 0
Total packets dropped 0
Packets dropped from untrusted ports 0
Packets dropped due to MAC address check failure 0
Packets dropped due to Option 82 insertion failure 0
Packets dropped due to o/p intf unknown O
Packets dropped which were unknown O
Packets dropped due to no trusted ports 0
Packets dropped due to dhcp relay not enabled O
Packets dropped due to no binding entry O
Packets dropped due to interface error/no interface 0
Packets dropped due to max hops exceeded 0
Packets dropped due to Queue full 0

Passaggio 14. Verificare le statistiche dei pacchetti relay.

Message Type	Rx	Тх	Drops	
Discover	29312	29311	0	
Offer	300001	300001	0	
Request(*)	29324	29324	0	
Ack	1574	1574	0	
Release(*)	191493	191493	0	
Decline	0	0	0	
Inform(*)	1540	1540	0	
Nack	472890	472890	0	
Total	1026134	1026133	0	

LEAF-2-VPC# show ip dhcp relay statistics

DHCP L3 FWD:		
Total Packets Received	:	0
Total Packets Forwarded	:	0
Total Packets Dropped	:	0
Non DHCP:		
Total Packets Received	:	0
Total Packets Forwarded	:	0
Total Packets Dropped	:	0
DROP:		
DHCP Relay not enabled	:	0
Invalid DHCP message type	:	0
Interface error	:	0
Tx failure towards server	:	0
Tx failure towards client	:	0
Unknown output interface	:	0
Unknown vrf or interface for server	:	0
Max hops exceeded	:	0
Option 82 validation failed	:	0
Packet Malformed	:	0
DHCP Request dropped on MCT	:	0
Relay Trusted port not configured	:	0
 * - These counters will show correct value whe 	n switch	
receives DHCP request packet with destination ip	as broadc	ast
address. If request is unicast it will be HW swi	tched	

Configurazione del server DHCP in Windows Server 2022

Configurazione dell'ambito di indirizzamento IP per gli host.

Passaggio 1. Aprire Server Manager e verificare che non vi siano allarmi sul server DHCP nel dashboard.



Dashboard da Server Manager in Windows Server 2022



Suggerimento: quando si fa doppio clic, l'immagine si ingrandisce.

Passaggio 2. Aprire l'applicazione server DHCP.

-		
_	- U	

T DHCP	Contents of DHCP	Satur	Actions
v i calabs-win2k22dc	alats-win2k22dc		0H0
) b04) b96			More Actions +
			Adivate Windows Golar Settings to activitie Wedows

Server DHCP su Windows Server 2022

Passaggio 3. Fare clic con il pulsante destro del mouse su IPv4 e selezionare New Scope (Nuovo ambito).



Nuovo ambito in DCHP

Passaggio 4. Fare clic su Next (Avanti).

New Scope Wizard	
	Welcome to the New Scope Wizard
	This wizard helps you set up a scope for distributing IP addresses to computers on your network.
	To continue, click Next.
	< Back Next > Cancel

Passaggio 5. Scrivere un nome e una descrizione. Nell'esempio, il nome è la subnet che appartiene alla VLAN 10 e la descrizione è l'L2VNI come L2VNI elencato nella VLAN 10.

New Scope Wizard	
Scope Name You have to private a description.	ovide an identifying scope name. You also have the option of providing
Type a name an how the scope	nd description for this scope. This information helps you quickly identify is to be used on your network.
Name:	10.10.10.0/24
Description:	L2VNI 101010
	< Rack Next > Cancel
	Cancel Venue

Passaggio 6. Configurare l'intervallo di indirizzi IP. Pool per gli host.

New Scope Wizard
IP Address Range You define the scope address range by identifying a set of consecutive IP addresses.
Configuration settings for DHCP Server
Enter the range of addresses that the scope distributes.
Start IP address: 10 . 10 . 1
End IP address: 10 . 10 . 254
Configuration settings that propagate to DHCP Client
Length: 24
Subnet mask: 255 . 255 . 0
< Back Next > Cancel

Passaggio 6. Escludere l'indirizzo IP condiviso dalla configurazione SVI nei VTEP. In questo esempio, l'interfaccia VLAN 10 ha l'indirizzo IP.10.10.1/24.



Avviso: se non si esclude l'indirizzo IP dall'SVI (o gateway predefinito), è possibile che gli indirizzi IP vengano duplicati e il traffico recapitato venga compromesso.

LEAF-1# show running-config interface vlan 10
<snip>
interface Vlan10
no shutdown
vrf member tenant-a
no ip redirects
ip address 10.10.10.1/24
no ipv6 redirects
fabric forwarding mode anycast-gateway
ip dhcp relay address 10.10.10.150
ip dhcp relay source-interface loopback100

New Scope Wizard
Add Exclusions and Delay Exclusions are addresses or a range of addresses that are not distributed by the server. A delay is the time duration by which the server will delay the transmission of a DHCPOFFER message.
Type the IP address range that you want to exclude. If you want to exclude a single address, type an address in Start IP address only.
Start IP address: End IP address: Image: I
Excluded address range: Address 10.10.10.1 Bemove
Subnet delay in milli second:
< Back Next > Cancel

Passaggio 7. Configurare la durata del lease dell'indirizzo IP. Questo valore si riferisce alla quantità di tempo durante la quale un host può utilizzare l'indirizzo IP assegnato prima di rinnovarlo.

New Scope Wizard
Lease Duration The lease duration specifies how long a client can use an IP address from this scope.
Lease durations should typically be equal to the average time the computer is connected to the same physical network. For mobile networks that consist mainly of portable computers or dial-up clients, shorter lease durations can be useful. Likewise, for a stable network that consists mainly of desktop computers at fixed locations, longer lease durations are more appropriate.
Set the duration for scope leases when distributed by this server.
Limited to:
Days: Hours: Minutes:
< Back Next > Cancel

Passaggio 8. Selezionare Sì, configurare le opzioni ora.

New Scope Wizard
Configure DHCP Options You have to configure the most common DHCP options before clients can use the scope.
When clients obtain an address, they are given DHCP options such as the IP addresses of routers (default gateways), DNS servers, and WINS settings for that scope.
The settings you select here are for this scope and override settings configured in the Server Options folder for this server.
Do you want to configure the DHCP options for this scope now?
Yes, I want to configure these options now O No. I will configure these options later
< Back Next > Cancel

Passaggio 9. Configurare l'indirizzo IP del gateway predefinito.

New Scope Wizard	
Router (Default Gateway) You can specify the router	rs, or default gateways, to be distributed by this scope.
To add an IP address for a	a router used by clients, enter the address below.
IP address:	
	Add
10.10.10.1	Remove
	Up
	Down
	< Back Next > Cancel

Passaggio 10. Configurare il nome di dominio e il server DNS.

New Scope Wizard		
Domain Name and DNS Servers The Domain Name System (DNS) maps ar on your network.	nd translates domain names used i	by clients
You can specify the parent domain you want the DNS name resolution. Parent domain: cisco.com	e client computers on your netwo	rk to use for
To configure scope clients to use DNS servers servers.	on your network, enter the IP add	fresses for those
Server name:	IP address:	
google.com	142 . 250 . 114 . 102	Add
Resolve		Remove
		Up
		Down
	< Back Next >	Cancel

Passaggio 11. Configurare il server WINS, se applicabile. Questa operazione può essere ignorata se le informazioni non sono note.

New Scope Wizard	
WINS Servers Computers running Windows can use WINS s names to IP addresses.	ververs to convert NetBIOS computer
Entering server IP addresses here enables Wi broadcasts to register and resolve NetBIOS na	ndows clients to query WINS before they use ames.
Server name:	IP address:
	Add
Resolve	Remove
	Up
	Down
To change this behavior for Windows DHCP o Type, in Scope Options.	clients modify option 046, WINS/NBT Node
	< Back Next > Cancel

Passaggio 12. Selezionare Sì, attiva l'ambito ora.

New Scope Wizard Activate Scope Clients can obtain address leases only if a scop	e is activated.		S
Do you want to activate this scope now? (* Yes, I want to activate this scope now) (* No, I will activate this scope later			
	< Back	Next >	Cancel

Configurazione dell'ambito per gli indirizzi IP univoci dai loopback in SVI come agente di inoltro DCHP.

Passaggio 1. Fare clic con il pulsante destro del mouse su IPv4 e selezionare IPv4Scope.



Nuovo ambito in DCHP

Passaggio 2. Scrivere un nome e una descrizione. In questo esempio, name è la subnet utilizzata per la subnet con indirizzo di loopback.



IPte: viene utilizzato un loopback per un indirizzo IP univoco loopback in tutta la struttura VxLAN per il tenant VxLAN. Questo deve essere annunciato nella ridistribuzione della route VPN BGP L2VPN in BGP all'interno del VRF del tenant corrispondente nell'indirizzo IPv4-famIPv4

LEAF-1# show running-config interface loopback 100
<snip>
interface loopback100
vrf member tenant-a
ip address 172.16.10.8/32

New Scope Wizard		
Scope Name You have to prive a description.	ovide an identifying scope name. You also have the option of providing	S.
Type a name ar how the scope	nd description for this scope. This information helps you quickly identify is to be used on your network.	
Name:	172.16.10.0/24	
Description:	Unique IP Gateway Address (SVI)	
	< Back Next > Cance	el

Passaggio 3. Configurare l'intervallo di indirizzi IPip. Pool di loopback.

New Scope Wizard
IP Address Range You define the scope address range by identifying a set of consecutive IP addresses.
Configuration settings for DHCP Server
Enter the range of addresses that the scope distributes.
Start IP address: 172 . 16 . 10 . 1
End IP address: 172 . 16 . 10 . 254
Configuration settings that propagate to DHCP Client
Length: 24-
Subnet mask: 255 . 255 . 255 . 0
< Back Next > Cancel

Passaggio 4. Configurare le esclusioni (facoltativo perché il server DHCP non assegna in lease indirizzi IP appartenenti a questa subnet).

New Scope Wizard
Add Exclusions and Delay Exclusions are addresses or a range of addresses that are not distributed by the server. A delay is the time duration by which the server will delay the transmission of a DHCPOFFER message.
Type the IP address range that you want to exclude. If you want to exclude a single address, type an address in Start IP address only.
Start IP address: End IP address: I I I I I I
Excluded address range: Remove
Subnet delay in milli second:
< Back Next > Cancel

Passaggio 5. Ignorare la durata del lease e fare clic su Avanti.

New Scope Wizard
Lease Duration The lease duration specifies how long a client can use an IP address from this scope.
Lease durations should typically be equal to the average time the computer is connected to the same physical network. For mobile networks that consist mainly of portable computers or dial-up clients, shorter lease durations can be useful. Likewise, for a stable network that consists mainly of desktop computers at fixed locations, longer lease durations are more appropriate.
Set the duration for scope leases when distributed by this server.
Limited to:
Days: Hours: Minutes:
< Back Next > Cancel

Passaggio 6. Selezionare No. Queste opzioni verranno configurate in seguito.

New Scope Wizard
Configure DHCP Options You have to configure the most common DHCP options before clients can use the scope.
When clients obtain an address, they are given DHCP options such as the IP addresses of routers (default gateways), DNS servers, and WINS settings for that scope.
The settings you select here are for this scope and override settings configured in the Server Options folder for this server.
C Yes, I want to configure these options now
No, I will configure these options later
< Back Next > Cancel

Passaggio 7. Fare clic su Finish (Fine).
New Scope Wizard	
	Completing the New Scope Wizard
	You have successfully completed the New Scope wizard.
	Before clients can receive addresses you need to do the following:
	1. Add any scope specific options (optional).
	2. Activate the scope.
	To provide high availability for this scope, configure failover for the newly added scope by right clicking on the scope and clicking on configure failover.
	To close this wizard, click Finish.
	< Back Finish Cancel

1

Passaggio 8. Fare clic con il pulsante destro del mouse sull'ambito creato e selezionare attiva.

DHCP		
File Action View H	elp	
🗢 🔿 🖄 📶 🗶 🛙	3 🧟 🗟 🚺 🗊 🕤	
DHCP Collabs-win2k22dc IPv4 Scope [172. Scope [Server (Policie: Filters IPv6	I6.10.0] 172.16.10.0/24 Display Statistics Advanced Advanced Configure Failover Reconcile Activate View Delete Refresh Export List Properties	Address Pool Address Leases Reservations Scope Options Policies
	нер	

Configurazione dell'ambito esteso per l'infrastruttura VxLAN.

Passaggio 1. Fare clic con il pulsante destro del mouse su IPv4 e selezionare Nuovo ambito esteso.



Passaggio 2. Fare clic su Next (Avanti).

New Superscope Wizard	
	Welcome to the New Superscope by the superscope of the superscope, which expands the number of IP network addresses that you can use in a network. A superscope allows several distinct scopes to be logically grouped under a single name. To continue, click Next.
	< Back Next > Cancel

Passaggio 3. Scrivere il nome dell'ambito esteso.

New Supersco	pe Wizard
Superscop You hav	e Name re to provide an identifying superscope name.
Name:	Scopes for VxLAN Fabric (with Opt 82)
	< <u>B</u> ack <u>N</u> ext > Cancel

Passaggio 4. Selezionare tutti gli ambiti che appartengono a VxLAN Fabric.

New Superscope Wizard
Select Scopes You create a superscope by building a collection of scopes.
Select one or more scopes from the list to add to the superscope. Available scopes:
[10.10.10.0] 10.10.10.0/24 [172.16.10.0] 172.16.10.0/24
< <u>B</u> ack <u>N</u> ext > Cancel

Passaggio 5. Selezionare tutti gli ambiti che appartengono a VxLAN Fabric.

New Superscope Wizard
Select Scopes You create a superscope by building a collection of scopes.
Select one or more scopes from the list to add to the superscope. Available scopes:
[10.10.10.0] 10.10.10.0/24 [172.16.10.0] 172.16.10.0/24
< <u>B</u> ack <u>N</u> ext > Cancel

Passaggio 6. Verificare che tutto l'ambito esteso dell'infrastruttura VxLAN sia presente e fare clic su Fine.

New Superscope Wizard	
	Completing the New Superscope Wizard
	You have successfully completed the New Superscope wizard.
	The following superscope will be created:
	Name: Scopes for VxLAN Fabric (with Opt 82)
	Scopes included in this superscope:
	[10.10.10.0] 10.10.10.0/24 [172.16.10.0] 172.16.10.0/24
	To close this wizard, click Finish.
	< Back Finish Cancel

Configurare l'opzione 82 negli ambiti host.

Passaggio 1. Fare clic con il pulsante destro del mouse su Policy (ultima opzione) all'interno dell'ambito per l'host e fare clic su New Policy.

OHOP								
e Action View Philip								
• • 2 2 4 4								
DHCP			Policy Name	Description	Processin	Level	Address Range	
erlabs-win23224c								
v bPv4						Dates and the	o demote show at this value.	
🗸 🧮 Superscope Scop	pes for VicLAN Fal	bric (with Opt 82)						
🗸 🛄 Scope (10.10	no.ej no.no.no.ov	34						
Address i	Peet							
-Address I	4000							
) 🛋 Reservati	076							
Scope Op	6046							
> Score (17	New Policy							
Server Option	Deactivate							
→ 2 Files Vew → → 2 Files Relet								
	Rehesh							
	Expert List							
	Help							

Passaggio 2. Scrivere un nome e una descrizione e fare clic su Avanti.



Nota: in questo esempio, il criterio viene creato per selezionare palP di indirizzamento IP, in particolare per gli host in Leaf-1 per VNI 101010 basedVNI Remote-ID (parametro dell'opzione 82).

DHCP Policy Configu	aration Wizard
Policy based IP /	Address and Option Assignment
This feature allows clients based on c	s you to distribute configurable settings (IP address, DHCP options) to ertain conditions (e.g. vendor class, user class, MAC address, etc.).
This wizard will gui Configuration Polic policy.	ide you setting up a new policy. Provide a name (e.g. VoIP Phone cy) and description (e.g. NTP Server option for VoIP Phones) for your
Policy Name:	VNI 101010
Description:	Policy to select scope for Leaf-1 using Remote-ID
	< Back Next > Cancel

Passaggio 3. Fare clic su Add. In Criteri, selezionare Inoltra informazioni sull'agente. In Operatore, selezionare Uguale a. Quindi selezionare Agent Remote ID e digitare il valore. Fare clic su OK, quindi su Avanti.



Nota: l'ID remoto viene ottenuto dall'indirizzo MAC dell'SVI a cui è associata la SVI.



Suggerimento: è possibile applicare un criterio a più ID remoti (o VTEP) aggiungendo ulteriori condizioni e selezionando OR anziché AND.

LEAF-1# show interface vlan 10
Vlan10 is up, line protocol is up, autostate enabled
Hardware is EtherSVI, address is 707d.b9b8.4daf <<<<
 Internet Address is 10.10.10.1/24
<snip>

DHCP Policy Configuration Wizard		
Cor Add/Edit Condition	?	× Sm
Specify a condition for the policy being configured. Select a criteria. and values for the condition. Criteria: Relay Agent Information Value (in hex) C Relay Agent Information: Que (in hex) C Relay Agent Information: C Agent Circuit ID: C Agent Remote ID: 707db9b84daf C Subscriber ID: Prefix wildcard(*) Append wildcard(*) Ok	operator	
< Back Next >		Cancel

Passaggio 4. Configurare l'indirizzo IP che gli indirizzi IP esistenti possono utilizzare sui VTEP selezionati dall'ID, quindi fare clic su Avanti.



Nota: in questo esempio esiste solo una macchina virtuale connessa a Foglia-1, quindi è richiesto un solo indirizzo IP. Qui viene aggiunto un secondo indirizzo IPn caso un altro host si connetta.

DHCP Policy Configuration Wizard
Configure settings for the policy If the conditions specified in the policy match a client request, the settings will be applied.
A scope can be subdivided into multiple IP address ranges. Clients that match the conditions defined in a policy will be issued an IP Address from the specified range. Configure the start and end IP address for the range. The start and end IP addresses for the range must be within the start and end IP addresses of the scope. The current scope IP address range is 10.10.10.1 - 10.10.10.254 If an IP address range is not configured for the policy, policy clients will be issued an IP address from the scope range. Do you want to configure an IP address range for the policy: (• Yes (• No Start IP address: 10.10.10.10.2 End IP address: 10.10.10.3 Percentage of IP address range: 0.8
< Back Next > Cancel

Passaggio 5. Selezionare la casella a sinistra di 003 Router in DCHP Standard Option. Scrivere quindi l'indirizzo IP del gateway predefinito per gli host che appartengono a questo criterio e premere Aggiungi. Fare clic su Next (Avanti).



Attenzione: è possibile selezionare più di un'opzione, ma in caso di dubbi sul valore da immettere, non selezionarla. Una configurazione incoerente o errata può causare un comportamento imprevisto.

DHCP Policy Configurat	ion Wizard		
Configure settings for If the conditions spe applied.	or the policy ecified in the policy mate	ch a client request, the settings will be	Ţ
Vendor class:	DHCP Standard Op	otions	•
Available Options		Description	^
002 Time Offset		UTC offset in seconds	
☑ 003 Router		Array of router addresses order	
C 004 Time Server		Array of time server addresses, `	~
Data entry			
Server name:			
		Resolve	
IP address:			
	Add		
10.10.10.1	Remove		
	Up		
	Down		
		< Back Next > Can	cel

Passaggio 6. Verificare le condizioni dei criteri e fare clic su Fine.

2 DHCP								- 0	3 ×
File Action View Help									
🗢 🔶 🙍 🔯 🔒 📓 📷									
2 DHCP	Policy Name	Description	Processin	Level	Address Range	State	Actions		
CXLabs-WIN2K22DC	VNI 101010	Policy to select scope for Leaf-1 using Remote-ID	1	Scope	10.10.10.2 - 10.10.10.3	Enabled	Policies		
✓ ▶ IPv4		, ,							_
Superscope Scopes for VxLAN Fabric (with Opt 82)							More Actions		,
Scope [10.10.10.0] L2VNI 101010									
Address Pool									
Address Leases									
2 Reservations									
Scope Options									
Policies									
Scope [172.16.10.0] 172.16.10.0/24									
Address Pool									
Address Leases									
Reservations									
Scope Options									
2 Policies									
Server Options									
2 Policies									
> 📝 Filters									
> 🖡 IPv6									
							11		

Packet-walk DCHP dall'inizio alla fine in VxLAN Fabric.

Discovery inviato dall'HOST-1

```
Ethernet II, Src: 00:50:56:a5:fd:dd, Dst: ff:ff:ff:ff:ff:ff
> Internet Protocol Version 4, Src: 0.0.0.0, Dst: 255.255.255.255
> User Datagram Protocol, Src Port: 68, Dst Port: 67

    Dynamic Host Configuration Protocol (Discover)

    Message type: Boot Request (1)
    Hardware type: Ethernet (0x01)
    Hardware address length: 6
    Hops: 0
    Transaction ID: 0xe9e35087
    Seconds elapsed: 0

    Bootp flags: 0x8000, Broadcast flag (Broadcast)

      1... .... = Broadcast flag: Broadcast
      .000 0000 0000 0000 = Reserved flags: 0x0000
    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: 00:50:56:a5:fd:dd
    Client hardware address padding: 0000000000000000000
    Server host name not given
    Boot file name not given
    Magic cookie: DHCP

    Option: (53) DHCP Message Type (Discover)

      Length: 1
      <Value: 01>
      DHCP: Discover (1)
  Option: (61) Client identifier
      Length: 7
      <Value: 01005056a5fddd>
      Hardware type: Ethernet (0x01)
      Client MAC address: 00:50:56:a5:fd:dd

    Option: (12) Host Name

      Length: 10
      <Value: 43584c6162732d573130>
      Host Name: CXLabs-W10
  v Option: (60) Vendor class identifier
      Length: 8
      <Value: 4d53465420352e30>
      Vendor class identifier: MSFT 5.0

    Option: (55) Parameter Request List

      Length: 14
      <Value: 0103060f1f212b2c2e2f7779f9fc>
      Parameter Request List Item: (1) Subnet Mask
      Parameter Request List Item: (3) Router
      Parameter Request List Item: (6) Domain Name Server
      Parameter Request List Item: (15) Domain Name
      Parameter Request List Item: (31) Perform Router Discover
      Parameter Request List Item: (33) Static Route
      Parameter Request List Item: (43) Vendor-Specific Information
      Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server
      Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type
      Parameter Request List Item: (47) NetBIOS over TCP/IP Scope
      Parameter Request List Item: (119) Domain Search
      Parameter Request List Item: (121) Classless Static Route
      Parameter Request List Item: (249) Private/Classless Static Route (Microsoft)
      Parameter Request List Item: (252) Private/Proxy autodiscovery

    Option: (255) End

      Option End: 255
    Padding: 000000000000000000
```

Rilevamento su FOGLIA-1

Rilevamento ricevuto su LEAF-1	Individuazione invio da FOGLIA-1
	Ethernet II, Src: 70:7d:b9:b8:4d:af, Dst: 10:b3:d6:a4:85:97 Internet Protocol Version 4, Src: 5,5,5,5, Dst: 13.13.13,24 User Dataram Protocol, Src Part: 65:233, Dst Part: 4789
	Virtual eXtensible Local Area Network Elarce 0x9898 VVIM Network TD (NIT)
Ethappat II Spei 00,50,55,55,fd,dd Det, ff,ff,ff,ff,ff,ff	Group Policy ID: 0
> Internet Protocol Version 4, Src: 0.0.0.0, Dst: 255.255.255.255	Reserved: 0
User Datagram Protocol, Src Port: 68, Dst Port: 67	 Ethernet II, Src: 70:7d:b9:b8:4d:af, Dst: 02:00:0d:0d:0d:0d:fe Internet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.150
 Dynamic Most Configuration Protocol (Discover) Message type: Root Request (1) 	User Datagram Protocol, Src Port: 67, Dst Port: 67 V Dynamic Host Configuration Protocol (Discover)
Hardware type: Ethernet (0x01)	Message type: Boot Request (1) Hardware type: Ethernet (0x01)
Hardware address length: 6	Hardware address length: 6
Transaction ID: 0xe9e35087	Transaction ID: 0xe9e35087
Seconds elapsed: 0	Bootp flags: 0x8000, Broadcast flag (Broadcast)
Bootp flags: 0x8000, Broadcast flag (Broadcast) 1 = Broadcast flag: Broadcast	Your (client) IP address: 0.0.0.0
.000 0000 0000 0000 = Reserved flags: 0x0000	Next server IP address: 0.0.0.0 Relay agent IP address: 172.16.10.8
Client IP address: 0.0.0	Client MAC address: 00:50:56:a5:fd:dd Client hardware address padding: 0000000000000000000
Next server IP address: 0.0.0.0	Server host name not given
Relay agent IP address: 0.0.0.0	Magic cookie: DHCP
Client MAC address: 00:50:56:a5:fd:dd	Length: 1
Server host name not given	<value: 01=""> DHCP: Discover (1)</value:>
Boot file name not given	 Option: (61) Client identifier Length: 7
<pre>Magic cookie: DHCP </pre> Option: (53) DHCP Message Type (Discover)	<value: 01005056a5fddd=""></value:>
Length: 1	Client MAC address: 00:50:56:a5:fd:dd
<value: 01=""></value:>	Length: 10
<pre>> Option: (61) Client identifier</pre>	<value: 3130="" 3205="" 43584cb162=""> Host Name: CXLabs-W10</value:>
Length: 7	 Option: (60) Vendor class identifier Length: 8
<value: 01005056a5fddd=""> Hardware type: Ethernet (0x01)</value:>	<value: 4d53465420352e30=""> Vendor class identifier: MSFT 5.0</value:>
Client MAC address: 00:50:56:a5:fd:dd	 Option: (55) Parameter Request List
 Option: (12) Host Name 	<value: 0103060f1f212b2c2e2f7779f9fc=""></value:>
<value: 43584c6162732d573130=""></value:>	Parameter Request List Item: (1) Subnet Mask Parameter Request List Item: (3) Router
Host Name: CXLabs-W10	Parameter Request List Item: (6) Domain Name Server Parameter Request List Item: (15) Domain Name
 Option: (60) Vendor class identifier Length: 8 	Parameter Request List Item: (31) Perform Router Discover Parameter Request List Item: (33) Static Route
<value: 4d53465420352e30=""></value:>	Parameter Request List Item: (43) Vendor-Specific Information Parameter Request List Item: (44) NetRIOS over ICP/IP Name Server
Vendor class identifier: MSFT 5.0	Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type
Option: (55) Parameter Request List Length: 14	Parameter Request List Item: (47) Metalos over TCF/IP Stope
<value: 0103060f1f212b2c2e2f7779f9fc=""></value:>	Parameter Request List item: (121) Classiess Static Route Parameter Request List Item: (249) Private/Classiess Static Route (Microsoft)
Parameter Request List Item: (1) Subnet Mask	Parameter Request List Item: (252) Private/Proxy autodiscovery V Option: (82) Agent Information Option
Parameter Request List Item: (6) Domain Name Server	Length: 47
Parameter Request List Item: (15) Domain Name	 Option 82 Suboption: (1) Agent Circuit ID Length: 14
Parameter Request List Item: (31) Perform Router Discover Parameter Request List Item: (33) Static Route	<value: 0108000600018a9200a00000000=""></value:>
Parameter Request List Item: (43) Vendor-Specific Information	 Option 82 Suboption: (2) Agent Remote ID
Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server	Length: 6 <value: 707db9b84daf=""></value:>
Parameter Request List Item: (40) NetBIOS over TCP/IP Node Type Parameter Request List Item: (47) NetBIOS over TCP/IP Scope	Agent Remote ID: 707db9b84daf <pre>> Option 82 Suboption: (151) VRF name/VPN ID</pre>
Parameter Request List Item: (119) Domain Search	Length: 9 <value: 0074656e616e742="" d61=""></value:>
Parameter Request List Item: (220) Private/Classless Static Route (Microsoft)	VRF name:
Parameter Request List Item: (252) Private/Proxy autodiscovery	 Option 82 Suboption: (11) Server ID Override (10.10.10.1)
> Option: (255) End	Lengtn: 4 <value: 0a0a0a01=""></value:>
Langrud: 000000000000000000000000000000000000	Server ID Override: 10.10.10.1 v Option 82 Suboption: (5) Link selection (10.10.10.0)
	Length: 4 <value: 0a0a0a00=""></value:>
	Link selection: 10.10.10.0
	Padding: 000000000000000



Suggerimento: quando si fa doppio clic, l'immagine si ingrandisce.

Rilevamento sul dorso

Rilevamento ricevuto su SPINE	Individuazione invio per SPINE
-------------------------------	--------------------------------

Ethernet II, Src: 70:7d:b9:b8:4d:af, Dst: 10:b3:d6:a4:85:97 Internet Protocol Version 4, Src: 5.5.5, Dst: 13.13.254 User Datagram Protocol, Src Port: 63:23, Dst Port: 4789 Virtual extensible Local Area Network > Flags: 0x800, VXLAN Network ID (VMI) Group Policy ID: 0 VXLAN Network Identifier (VMI): 303030 Reserved: 0 Ethernet II, Src: 70:7d:b9:b8:4d:af, Dst: 02:00:0d:0d:0d:fe Internet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.18.150 User Datagram Protocol, Src Port: 67, Dst Port: 67 Oymaak: Most Configuration Protocol (Discover) Message type: Boot Request (1) Hardware type: Ethernet (0x01) Hardware address length: 6 Hops: 1 Transaction ID: 0xe0:5308 Seconds clapsed: 0 Bootp flags: 0x8008, Broadcast flag (Broadcast) Client IP address: 0.0.0 Next server IP address: 0.0.0	<pre>Ethernet II, Src: 10:b3:d6:a4:85:97, Dst: 60:26:aa:85:98:87 Internet Protocol Version 4, Src: 5.5.5, Dst: 13.13.13.254 User Datagram Protocol, Src Port: 6523, Dst Port: 4789 Virtual extensible Local Area Network Virtual extensible Local Area Network VIAN Network IDentifier (WI): 303030 Reservet 0 Ethernet II, Src: 70:76:09:05:04.3rc: 12.16:10.8, Dst: 10.10.10.150 User Datagram Protocol, Src Port: 67, Dst Port: 67 Dynamic Mest Configuration Protocol (Discover) Message type: Boot Request (1) Hardware address length: 6 Hops: 1 Transaction ID: 0x:e935087 Seconds elapsed: 0 Bootp flags: 0x80000, Broadcast flag (Broadcast) Client IP address: 0.0.0 Your (Client) IP address: 0.0.0</pre>
Client MAL address: 00:50:50:53:10:00 Client Marware address padding: 000000000000000000 Server host name not given Boot file name not given Magic Cookie: DHCP v Option: (53) DHCP Message Type (Discover) Lenth	Client MAC address: 00:50:56:a5:fd:dd Client MAC address: 00:50:56:a5:fd:dd Server host name not given Boot file name not given Magic cookie: DHCP • Option: (S3) DHCP Message Type (Discover)
Lengun: 1 -Value: 010-Class identifier Length: 7 -Value: 0105056a5fddd> -Value: 0105056a5fddd> Client ACA address: 0050566a5fddd -Option: (12) Host Name Length: 10 -Value: 4354c6162732d573130> Host Name: CXL05-X10 -Value: A354cfb2732d573130> Host Name: CXL05-X10 -Option: (60) Vendor Class identifier Length: 8	Length: 1 <v3lue: 01=""> DHCP: Discover (1) Option: (61) Clint identifier Length: 7 <v3lue: 0108595635fddd=""> Hardware type: Ethernet (0x01) Client MAC address: 00950556:a5fd:dd 0 option: (12) HOST Name Length: 10 <value: 43584c5162732d573130=""> Host Name: CALBb-THB 0 option: (60) Vendor class identifier 0 plentie 8</value:></v3lue:></v3lue:>
<value: 40534065420352c30=""> Vendor Class identifier: MSFT 5.0 • Option: (5) Parameter Request List Length: 14 - Value: 01030609117212b2c2e27777919fc> Parameter Request List Item: (1) Subnet Mask Parameter Request List Item: (3) Router Parameter Request List Item: (3) Router</value:>	<pre><value: 4d534d5420352c30=""> Vendor class identifier: MSF 5.8 Option: (55) Parameter Request List Length: 14 <pre><value: 003060f1f212b2c2c2f7779f6fc=""> <value: 003060f1f212b2c2c2f7779f6fc=""> Parameter Request List Tiem: (1) Subnet Mask Parameter Request List Item: (3) Router </value:></value:></pre></value:></pre>
Parameter Request List Item: (15) Domain Name Parameter Request List Item: (31) Perform Router Discover Parameter Request List Item: (33) Static Route Parameter Request List Item: (34) Vendor-Specific Information Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server Parameter Request List Item: (46) NetBIOS over TCP/IP Name Server Parameter Request List Item: (47) NetBIOS over TCP/IP Note Parameter Request List Item: (47) NetBIOS over TCP/IP Scope Parameter Request List Item: (141) Domain Search Parameter Request List Item: (121) Classless Static Route Parameter Request List Item: (122) Private/Proxy autodiscovery Parameter Request List Item: (252) Private/Proxy autodiscovery	Parameter Request List Item: (3) Domain Name Parameter Request List Item: (3) Domain Name Parameter Request List Item: (3) Domain Name Parameter Request List Item: (3) Static Router Discover Parameter Request List Item: (4) NetBIOS over TCP/IP Name Server Parameter Request List Item: (46) NetBIOS over TCP/IP Name Server Parameter Request List Item: (46) NetBIOS over TCP/IP Name Server Parameter Request List Item: (47) NetBIOS over TCP/IP Name Server Parameter Request List Item: (19) Domain Search Parameter Request List Item: (12) Classless Static Route (Microsoft) Parameter Request List Item: (24) Private/Classless Static Route (Microsoft) Parameter Request List Item: (25) Private/Proxy autodiscovery
Length: 47 -Value: 01001080000000000000000000000000000000	<pre>> Uption: (2/) Agent information Uption Length: 47 <pre>Option 82 Suboption: (1) Agent Circuit ID Length: 14 Option 82 Suboption: (2) Agent Remote ID Length: 6 </pre> Agent Remote ID: 707db9b84daf Option 82 Suboption: (15) VRF name/VPN ID Length: 9</pre>
<pre><value: 0074650e516e7420b1=""> (VBF name:</value:></pre>	<pre> VFF name: [Expert Info (Warning/Undecoded): Trailing stray characters] [Expert Info (Warning/Undecoded): Trailing stray characters] Option 82 Suboption: (11) Server ID Override (18.10.10.1) Length: 4 </pre>

Discovery su LEAF-1-vPC

Rilevamento ricevuto su LEAF-1-vPC	Discovery inviato da LEAF-1-vPC
------------------------------------	---------------------------------

Ethernet II, Src: 10:b3:d6:a4:85:97, Dst: 60:26:aa:85:98:87	> Ethernet II, Src: 60:26:aa:85:98:87, Dst: 00:50:56:a5:dc:ca
> Internet Protocol Version 4, Src: 5.5.5.5, Dst: 13.13.13.254	Thernet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.10.150
liser Datagram Protocol, Src Port: 65233, Dst Port: 4789	Her Debarrow Brokenes) Fre Dark, 67 Det Dark, 67
Vistual events i and i and i and intervents	voser batagram Protocol, Src Port: 67
VILLUAL CALCHSIDIC LUGAL AFCA WOLWOFK	Uynamic Most configuration Protocol (Discover)
> Flags: 0x0800, VXLAN Network ID (VNI)	Message type: Boot Request (1)
Group Policy ID: 0	Hardware type: Ethernet (8x81)
VXLAN Network Identifier (VNI): 303030	Hardware system teneth 6
Decement a	naruware auuress length; b
Reserved: 0	Hops: 1
> Ethernet II, Src: 70:7d:b9:b8:4d:af, Dst: 02:00:0d:0d:0d:fe	Transaction ID: 0xe9e35087
Internet Protocol Version 4, Src: 172, 16, 10, 8, Dst: 10, 10, 10, 150	Forende al anno 100000000
Heer Datagene Brotocol - Car Dout, 67 Dat Dart, 67	Seconds etapsed. e
User Datagram Protocol, Src Port: 67, Dst Port: 67	 Bootp flags: 0x8000, Broadcast flag (Broadcast)
 Dynamic Host Configuration Protocol (Discover) 	1 = Broadcast flag: Broadcast
Message type: Boot Request (1)	999 9999 9099 9090 = Reserved flags: $9x9999$
Hardware type: Ethernet (0x01)	
Understand and the second seco	ctient iP address: 0.0.0.0
nardware address length: 6	Your (client) IP address: 0.0.0.0
Hops: 1	Next server IP address: 0.0.0.0
Transaction ID: 0xe9e35087	Pelay agent TP address: 172 16 10 8
Seconds elanced: 0	Netay agent in address. 17210.10.0
December (1) and (1) a	CLIENT MAC address: 00:50:50:35:Td:dd
booth reads: exceed, broadcast read (broadcast)	Client hardware address padding: 0000000000000000000
Client IP address: 0.0.0.0	Server host name not given
Your (client) IP address: 0.0.0.0	Root file name not given
Next conver TP address: 0.0.0.0	boot file hund hot given
	Magic cookie: DHCP
netay agent ir audress. 172.10.10.0	 Option: (53) DHCP Message Type (Discover)
Client MAC address: 00:50:56:a5:fd:dd	Length: 1
Client hardware address padding: 0000000000000000000	dalue: 015
Server host name not given	DUCD, DATE (1)
Boster file same not given	UNCP: Discover (1)
DOOL LILE NAME HOL GIVEN	 Option: (61) Client identifier
Magic cookie: DHCP	Length: 7
 Option: (53) DHCP Message Type (Discover) 	d/alue, 0100505555tddds
length: 1	And the standard standary
deligner a	Hardware type: Ethernet (0x01)
svalue: DI>	Client MAC address: 00:50:56:a5:fd:dd
DHCP: Discover (1)	v Option: (12) Host Name
Option: (61) Client identifier	Length: 10
Length: 7	Length. 10
No. 1. A TRADE OF A CALL	<value: 43584c6162732d573130=""></value:>
<value: 01005056a51000=""></value:>	Host Name: CXLabs-W10
Hardware type: Ethernet (0x01)	 Option: (60) Vendor class identifier
Client MAC address: 00:50:56:a5:fd:dd	- option (ov) vendor etabs identifier
Ontion: (12) Host Name	Length: 8
Looth 12 Hor Hunc	<value: 4d53465420352e30=""></value:>
Length: 10	Vendor class identifier: MSFT 5.0
<value: 43584c6162732d573130=""></value:>	 Option: (55) Parameter Request List
Host Name: CXLabs-W10	Length: 14
 Option: (60) Vendor class identifier 	- 1/3/1/a 0102060#1#2120202#7770#0##~
Length: 8	
	Parameter Request List Item: (1) Subnet Mask
Vorder elses (dortificer, MCET 5.0	Parameter Request List Item: (3) Router
Vendor Class Identifier: HSFI 5.0	Parameter Request List Item: (6) Domain Name Server
 Option: (55) Parameter Request List 	Parameter Request List Item: (15) Domain Name
Length: 14	Deserved request list Them (21) Desfers Deutes Discover
<value: 0103060f1f212b2c2e2f7779f9fc=""></value:>	Parameter Request List item: (ii) Perform Router Discover
Decementar Deguart List Tram. (1) Subnat Mack	Parameter Request List Item: (33) Static Route
Parameter Request List Item, (1) Subject Hask	Parameter Request List Item: (43) Vendor-Specific Information
Parameter Request List Item: (3) Router	Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server
Parameter Request List Item: (6) Domain Name Server	Desentes Dequest List Tem; (46) NetBTOC over TCD/ID Node Type
Parameter Request List Item: (15) Domain Name	Parameter Request List Term, (47) Netbros over TC/TF Note Type
Parameter Request List Item: (31) Perform Router Discover	Parameter Request List Item: (47) Netbios over ICP/IP Scope
Descenter Request List Them (22) Statis Dauta	Parameter Request List Item: (119) Domain Search
Parameter request List item. (3) static route	Parameter Request List Item: (121) Classless Static Route
Parameter Request List Item: (43) Vendor-Specific Information	Parameter Request List Item: (249) Private/Classless Static Route (Microsoft)
Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server	Descent Request List Them (252) Private (Recurs autodisconse)
Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type	Parameter Request List item: (252) Private/Proxy autodiscovery
Parameter Request List Item: (47) NetRIOS over TCP/ID Scope	Option: (82) Agent Information Option
Promoter neguest List Item; (4/) NetBLOS Ver ILF/IF Stupe	Lenath: 47
Parameter Request List Item: (119) Domain Search	Value: 010e0102000600012s0200.0000000000206707db0b2ddsf07000074656e616e742d610e040s0s0s0105040s0s0.00
Parameter Request List Item: (121) Classless Static Route	Starter, are starter and an area of the starter and an area of the starter of
Parameter Request List Item: (249) Private/Classless Static Route (Microsoft)	v uption of suboption: (1) Agent Circuit ID
Parameter Request List Item: (252) Private/Proxy autodiscovery	Length: 14
Ontion: (82) Ament Information Ontion	<value: 0108000600018a9200a00000000=""></value:>
Speaker (ar, agent antoinotaon option	Agent Circuit ID: 0108000600018a9200a00000000
Length: 4/	 Ontion 82 Subortion: (2) Agent Remote TD
<value: 010c0108000b00018a9200a000000000020b707db9b84daf97090074656e616e742d610b040a0a0a0105040a0a0a00=""></value:>	Langth 6
 Option 82 Suboption: (1) Agent Circuit ID 	Jung un v
Length: 14	<value: 0="" db9b84daf=""></value:>
Value: 0108000500018392003000000005	Agent Remote ID: 707db9b84daf
	 Option 82 Suboption: (151) VRF name/VPN ID
When CTUCALL IN: ALABABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	Length: 9
Option 82 Suboption: (2) Agent Remote ID	
Length: 6	 value: 00/40000000/42001>
<value: 707db9b84daf=""></value:>	VRF name:
Agent Remote ID: 787db9b84daf	[Expert Info (Warning/Undecoded): Trailing stray characters]
Agent Remote 10, Fordo Joordan	[Trailing stray characters]
- Opision of Suboption: (151) AVE Hame/AFM ID	Message: Trailing stray characters>
Length: 9	[Soverity local: Warning]
<value: 0074656e616e742d61=""></value:>	Loeverity tevet: warning)
VRF name:	[Group: Undecoded]
Expert Info (Warning/Undecoded): Trailing stray characters]	 Option 82 Suboption: (11) Server ID Override (10.10.10.1)
Portion 97 Subaptions (11) Service TO Preside (10 10 10 10)	Length: 4
option of suboption: (11) Server 10 Override (10.10.10.1)	101ue 0.000
Length: 4	vertue: eddoddi.
<value: 0a0a0a01=""></value:>	Server ID Override: 10.10.10.1
Server ID Override: 10.10.10.1	 Option 82 Suboption: (5) Link selection (10.10.10.0)
Option 82 Subortion: (5) Link colection (10 10 10 0)	Length: 4
- option of Subortion. (3) LINK Selection (10.10.10.0)	<value: 0a0a0a00=""></value:>
Length: 4	Link calention: 10 10 10 0
<value: 0a0a0a00=""></value:>	LINK Selection: 10.10.00
Link selection: 10.10.10.0	v Option: (255) End
Option: (255) End	
	Option End: 255
Padding: 000000000000000	Option End: 255 Padding: 000000000000000
Padding: 000000000000000	Option End: 255 Padding: 000000000000000

Nota: LEAF-2-vPC riceve il pacchetto Discovert, ma è solo commutato. L'indirizzo MAC di destinazione appartiene al server DHCP.

Rilevamento ricevuto sul server DHCP

```
Ethernet II, Src: 60:26:aa:85:98:87, Dst: 00:50:56:a5:dc:ca
Internet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.10.150
User Datagram Protocol, Src Port: 67, Dst Port: 67
Dynamic Host Configuration Protocol (Discover)
  Message type: Boot Request (1)
  Hardware type: Ethernet (0x01)
  Hardware address length: 6
  Hops: 1
  Transaction ID: 0xe9e35087
  Seconds elapsed: 0
 Bootp flags: 0x8000, Broadcast flag (Broadcast)
    1... .... = Broadcast flag: Broadcast
    .000 0000 0000 0000 = Reserved flags: 0x0000
  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: 172.16.10.8
  Client MAC address: 00:50:56:a5:fd:dd
  Client hardware address padding: 0000000000000000000
  Server host name not given
  Boot file name not given
  Magic cookie: DHCP
 Option: (53) DHCP Message Type (Discover)
    Length: 1
    <Value: 01>
    DHCP: Discover (1)

    Option: (61) Client identifier

    Length: 7
    <Value: 01005056a5fddd>
    Hardware type: Ethernet (0x01)
    Client MAC address: 00:50:56:a5:fd:dd

    Option: (12) Host Name

    Length: 10
    <Value: 43584c6162732d573130>
    Host Name: CXLabs-W10

    Option: (60) Vendor class identifier

    Length: 8
    <Value: 4d53465420352e30>
    Vendor class identifier: MSFT 5.0
Option: (55) Parameter Request List
    Length: 14
    <Value: 0103060f1f212b2c2e2f7779f9fc>
    Parameter Request List Item: (1) Subnet Mask
    Parameter Request List Item: (3) Router
    Parameter Request List Item: (6) Domain Name Server
    Parameter Request List Item: (15) Domain Name
    Parameter Request List Item: (31) Perform Router Discover
    Parameter Request List Item: (33) Static Route
    Parameter Request List Item: (43) Vendor-Specific Information
    Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server
    Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type
    Parameter Request List Item: (47) NetBIOS over TCP/IP Scope
    Parameter Request List Item: (119) Domain Search
    Parameter Request List Item: (121) Classless Static Route
    Parameter Request List Item: (249) Private/Classless Static Route (Microsoft)
    Parameter Request List Item: (252) Private/Proxy autodiscovery

    Option: (82) Agent Information Option

    Length: 47
    <Value: 010e0108000600018a9200a0000000000206707db9b84daf97090074656e616e742d610b040a0a0a0105040a0a0a00>

    Option 82 Suboption: (1) Agent Circuit ID

      Length: 14
      <Value: 0108000600018a9200a00000000>
      Agent Circuit ID: 0108000600018a9200a00000000

    Option 82 Suboption: (2) Agent Remote ID

      Length: 6
      <Value: 707db9b84daf>
      Agent Remote ID: 707db9b84daf

    Option 82 Suboption: (151) VRF name/VPN ID

      Length: 9
      <Value: 0074656e616e742d61>
     VRF name:

    [Expert Info (Warning/Undecoded): Trailing stray characters]

           [Trailing stray characters]
           <Message: Trailing stray characters>
           [Severity level: Warning]
           [Group: Undecoded]

    Option 82 Suboption: (11) Server ID Override (10.10.10.1)

      Length: 4
      <Value: 0a0a0a01>
      Server ID Override: 10.10.10.1
   Option 82 Suboption: (5) Link selection (10,10,10,0)
      Length: 4
      <Value: 0a0a0a00>
      Link selection: 10.10.10.0
 Option: (255) End
    Option End: 255
  Padding: 000000000000000000
```

Offerta DHCP inviata dal server DHCP

```
Ethernet II, Src: 60:26:aa:85:98:87, Dst: 00:50:56:a5:dc:ca
Internet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.10.150
User Datagram Protocol, Src Port: 67, Dst Port: 67
Dynamic Host Configuration Protocol (Discover)
  Message type: Boot Request (1)
  Hardware type: Ethernet (0x01)
  Hardware address length: 6
  Hops: 1
  Transaction ID: 0xe9e35087
  Seconds elapsed: 0
  Bootp flags: 0x8000, Broadcast flag (Broadcast)
    1... .... = Broadcast flag: Broadcast
    .000 0000 0000 0000 = Reserved flags: 0x0000
  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: 172.16.10.8
  Client MAC address: 00:50:56:a5:fd:dd
  Client hardware address padding: 0000000000000000000
  Server host name not given
  Boot file name not given
  Magic cookie: DHCP

    Option: (53) DHCP Message Type (Discover)

    Length: 1
    <Value: 01>
    DHCP: Discover (1)

    Option: (61) Client identifier

    Length: 7
    <Value: 01005056a5fddd>
    Hardware type: Ethernet (0x01)
    Client MAC address: 00:50:56:a5:fd:dd

    Option: (12) Host Name

    Length: 10
    <Value: 43584c6162732d573130>
    Host Name: CXLabs-W10

    Option: (60) Vendor class identifier

    Length: 8
    <Value: 4d53465420352e30>
    Vendor class identifier: MSFT 5.0

    Option: (55) Parameter Request List

    Length: 14
    <Value: 0103060f1f212b2c2e2f7779f9fc>
    Parameter Request List Item: (1) Subnet Mask
    Parameter Request List Item: (3) Router
    Parameter Request List Item: (6) Domain Name Server
    Parameter Request List Item: (15) Domain Name
    Parameter Request List Item: (31) Perform Router Discover
    Parameter Request List Item: (33) Static Route
    Parameter Request List Item: (43) Vendor-Specific Information
    Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server
    Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type
    Parameter Request List Item: (47) NetBIOS over TCP/IP Scope
    Parameter Request List Item: (119) Domain Search
    Parameter Request List Item: (121) Classless Static Route
    Parameter Request List Item: (249) Private/Classless Static Route (Microsoft)
Parameter Request List Item: (252) Private/Proxy autodiscovery

    Option: (82) Agent Information Option

    Length: 47
    <Value: 010e0108000600018a9200a0000000000206707db9b84da197090074656e616e742d610b040a0a0a0105040a0a0a00>

    Option 82 Suboption: (1) Agent Circuit ID

      Length: 14
       <Value: 0108000600018a9200a00000000>
      Agent Circuit ID: 0108000600018a9200a00000000
  · Option 82 Suboption: (2) Agent Remote ID
      Length: 6
       <Value: 707db9b84daf>
      Agent Remote ID: 707db9b84daf

    Option 82 Suboption: (151) VRF name/VPN ID

      Length: 9
       <Value: 0074656e616e742d61>
     VRF name:

    [Expert Info (Warning/Undecoded): Trailing stray characters]

           [Trailing stray characters]
           <Message: Trailing stray characters>
           [Severity level: Warning]
           [Group: Undecoded]

    Option 82 Suboption: (11) Server ID Override (10.10.10.1)

      Length: 4
       <Value: 0a0a0a01>
      Server ID Override: 10.10.10.1

    Option 82 Suboption: (5) Link selection (10.10.10.0)

      Length: 4
       <Value: 0a0a0a00>
      Link selection: 10.10.10.0
  Option: (255) End
    Option End: 255
  Padding: 00000000000000000
```

Offerta DHCP su LEAF-2-vPC

Offerta ricevuta su LEAF-2-vPC	Offerta inviata da LEAF-2-vPC
<pre>> Ethernet II, Src: 00:50:55:a5:dc:Ca, Dst: 00:00:0a:0a:0a Intermet Protocol, Version 4, Src: 10:0.10.150, Dst: 172.16.10.8 User Datagram Protocol, Src Port: 67, Dst: 172.16.10.10.10.10.10.10.10.10.10.10.10.10.10.</pre>	<pre>> Internet Protocol Version 4, Src: 13.13.13.254, DSt Port: 5.5.5.5 User Datagram Protocol, Src Port: 65310, DSt Port: 4789 </pre> Virtual extensible Local Area Network 10 VNI1 Group Policy ID: 0 VXEAN Network Identifier (WI1): 393830 VXEAN Network Identifier (WI1): 393830 VXEAN Network Identifier (WI1): 393830 VXEAN Network Identifier (WI1): 493830 VXEAN Network Identifier (WI1): 49738472626566400 VXEAN Network Identifier (WI1): 4973847262656
Agent Remote ID: 707db9b84daf Option 82 Suboption: (151) VRF name/VPN ID 	Agent (ircuit ID: 010800060001303200a0000000 Option 82 Suboption: (2) Agent Remote ID
 <value: 0074656e616e742d61=""></value:> VRF name: 	Lengin: ö <value: 707db9b84daf≻<br="">Agent Remote ID: 707db9b84daf</value:>
 [Expert Info (Warning/Undecoded): Trailing stray characters] [Trailing stray characters] 	 Option 82 Suboption: (151) VRF name/VPN ID Length: 9
<pre><message: characters="" stray="" trailing=""> [Severity level: Warning]</message:></pre>	<value: 0074656e616e742d61=""> VRF name:</value:>
vorup: vonecoaeaj • Option & Suboption: (11) Server ID Override (10.10.10.1) Length: 4 • <value: 8a8a8a81=""> Server ID Override: 10.10.10.1 • Option & Suboption: (5) Link selection (10.10.10.0) Length: 4 • <value: 8a8a8a80=""></value:></value:>	<pre> [Expert Info (Warning/Undecoded): Trailing stray characters] [Trailing stray characters] -#essage: Trailing stray characters> [Severity level: Warning] [Group: Undecoded] option a2 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 dvalue: daadaal> </pre>
Link selection: 10.10.10.0 • Option: (255) End Option End: 255	<pre>Server 0.000000015 Server 10 Override: 10.10.10.1 Option 82 Suboption: (5) Link selection (10.10.10.0) Length: 4 <value: 00000000=""> Link selection: 10.10.10.0 Option (255) End Option End: 255</value:></pre>

Offerta DHCP vPC SPINE

Offerta ricevuta su SPINE Invia offerta per SPINE

Ethernet II, Src: 60:26:aa:85:95:87, Dst: 10:b3:d6:a4:85:97	
> Internet Protocol Version 4, Src: 13.13.13.254, Dst: 5.5.5.5	
> User Datagram Protocol, Src Port: 65518, Dst Port: 4789	
Virtual extensible Local Area Network	
Flags Av8888, VXIAN Network TD (VNT)	
Crough Dalies The A Harden AN (114)	
Group Policy ID: 6	Ethernet II Src: 10:53:d6:a4:85:97 Dct: 70:7d:59:58:4d:af
VXLAN Network Identifier (VNI): 303030	Internet Britanal Vierden 4. Srst 12 12 12 254 Det 5 5 5 5 5
Reserved: 0	7 Internet Protocol Version 4, 5rc: 15.15.15.24, bst: 55.5.5
> Ethernet II, Src: 02:00:0d:0d:0d:fe, Dst: 70:7d:b9:b8:4d:af	> User Datagram Protocol, Src Port: 65518, Dst Port: 4789
> Internet Protocol Version 4, Src: 10.10.10.150, Dst: 172.16.10.8	Virtual eXtensible Local Area Network
liser Datagram Protocol Src Port: 67 Det Port: 67	> Flags: 0x0800, VXLAN Network ID (VNI)
Description and Configuration Protocol, (Office)	Group Policy ID: 0
bynamic Host configuration Protocot (offer)	VYIAN Network Identifier (UNI): 202020
Message type: Boot Reply (2)	Prevented A Litericities (W17, 565656
Hardware type: Ethernet (0x01)	Reserved: 0
Hardware address length: 6	Ethernet II, Src: 02:00:0d:0d:0d:fe, Dst: 70:7d:b9:b8:4d:af
Hops: 0	> Internet Protocol Version 4, Src: 10.10.10.150, Dst: 172.16.10.8
Tescartian The Busha25007	> User Datagram Protocol, Src Port: 67. Dst Port: 67
Transaction 10: 0x89655087	 Dynamic Host Configuration Protocol (Offer)
Seconds elapsed: 0	Marce host brock back back (2)
Bootp flags: 0x8000, Broadcast flag (Broadcast)	Hessage type: boot kepty (2)
1 = Broadcast flag: Broadcast	Hardware type: Ethernet (0x01)
.000 0000 0000 = Reserved flags: 0x0000	Hardware address length: 6
Client TP address: 0.0.0.0	Hops: 0
Value (client) TO address, 10 10 10 2	Transaction ID: 0xe9e35087
Your (client) IP address: 10.10.10.3	Seconds alansed: A
Next server IP address: 10.10.10.150	Second classes areas and and the (Anotherst)
Relay agent IP address: 172.16.10.8	bulp regs: boote , broadcast reg (broadcast)
Client MAC address: 00:50:56:a5:fd:dd	Client IP address: 0.0.0
Client hardware address padding: 000000000000000000	Your (client) IP address: 10.10.10.3
Server host name not given	Next server IP address: 10.10.10.150
Roat file news not garan	Relay agent IP address: 172.16.10.8
boot file name not given	Client MAC address: 00:50:56:a5:fd:dd
Magic cookie: DHCP	Client hard and cash dorses paddings (000000000000000000000000000000000000
 Option: (53) DHCP Message Type (Offer) 	erreur um aus annuez banarud: aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
Length: 1	Server nost name not given
-Value: 02-	Boot file name not given
	Magic cookie: DHCP
DHCP: OTTER (2)	Option: (53) DHCP Massage Type (Offer)
 Option: (1) Subnet Mask (255.255.25.0) 	option (JS) bit Hessage Type (offer)
Length: 4	Length: 1
<value: ffffff00=""></value:>	<value: 02=""></value:>
Subnet Mask: 255,255,255,0	DHCP: Offer (2)
Obtion, (E) Dancial Time Value	 Option: (1) Subnet Mask (255.255.25.0)
· option: (58) kenewat tille value	Length: 4
Length: 4	1/31/04 #########
<value: 0000a8c0=""></value:>	Svarde, Hillinger 255 255 A
Renewal Time Value: 12 hours (43200)	Subnet Mask: 255.255.20
 Option: (59) Rebinding Time Value 	Option: (58) Renewal Time Value
length: 4	Length: 4
	<value: 0000a8c0=""></value:>
8/10: 00012/50	Renewal Time Value: 12 hours (43200)
Rebinding Time Value: 21 hours (75600)	Octions (Table Voldes, 12 Hours (4520)
 Option: (51) IP Address Lease Time 	· option: (59) Resincing Time Value
Length: 4	Length: 4
-Value: 00015190-	<value: 00012750=""></value:>
	Rebinding Time Value: 21 hours (75600)
IP Address Lease Time: 1 day (86400)	Option: (51) IP Address Losse Time
 Option: (54) DHCP Server Identifier (10.10.10.1) 	option (J1) if Address Lease Time
Length: 4	Length: 4
<value: 0a0a0a01=""></value:>	<value: 00015180=""></value:>
DHCP Server Identifier: 10 10 10 1	IP Address Lease Time: 1 day (86400)
	Option: (54) DHCP Server Identifier (10.10.10.1)
option: (3) Router	Length: 4
Length: 4	
<value: 0a0a0a01=""></value:>	
Router: 10.10.10.1	DHCP Server Identifier: 10.10.10.1
Ontion: (15) Domain Name	 Option: (15) Domain Name
Length: 10	Length: 10
	<value: 636973636f2e636f6d00=""></value:>
<va(ue: 0303="" 303012603010000=""></va(ue:>	Domain Name: cicc com
Domain Name: Cisco.com	Overlage (0.2) Association Ostion
 Option: (82) Agent Information Option 	<pre>> Uption: (82) Agent information Option</pre>
Longhi 47	Length: 47
UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	<value: 010e0108000600018a9200a0000000000206707db9b84daf97090074656e616e742d610b040a0a0a0105040a0a0a00<="" p=""></value:>
<vacue: a.acta.usaavaabaavaavaavaavaavaavaavaavaavaavaava<="" td=""><td> Option 82 Suboption: (1) Agent Circuit ID </td></vacue:>	 Option 82 Suboption: (1) Agent Circuit ID
 Uption 82 Suboption: (1) Agent Circuit ID 	Length: 14
Length: 14	Value: 0108000500018a9200a000000a
	240/001 010000001003500000000000
<a9(n6: 010000000010935009000000000<="" td=""><td>Agent Circuit TD: 0102000600012-02000000000</td></a9(n6:>	Agent Circuit TD: 0102000600012-02000000000
<pre><value: 01000000001832003000000000<br="">Agent Circuit ID: 0108000600018392003000000000</value:></pre>	Agent Circuit ID: 0108000600018a9200a0000000
<pre><value: 010000000000000000000000000<br="">Agent Circuit ID: 0108000600018a9200a000000000 0.0ption 25 Subartion: (2) Apart Perset TD</value:></pre>	Agent Circuit ID: 0108000600018a9200a00000000 ~ Option 82 Suboption: (2) Agent Remote ID
<pre><queue: blooboodbalaayoobaarboodbaayoobaarboodbaayooba<br="">yoo obaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayo yoo obaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoo yoo obaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoo yoo obaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoo yoo obaayoo yoo obaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoobaayoo</queue:></pre>	Agent Circuit ID: 010800060001839200a0000000 Option 82 Suboption: (2) Agent Remote ID Length: 6
<pre><value: 0100000000001043200000000000<br="">Agent Circuit ID: 010000000014320000000000 0ption 82 Suboption: (2) Agent Remote ID Length: 6</value:></pre>	Agent Circuit ID: 0108000600018a9200a0000000 • Option & Suboption: (2) Agent Remote ID Length: 6 - ≪Value: 707db984daf>
<pre><value: bloowboobdladz0owboobdood0000<br="">Agent Circuit ID: 00800060001adz2000a00000000 > Option 82 Suboption: (2) Agent Remote ID Length: 6 <value: 707db9b84daf=""></value:></value:></pre>	Agent Circuit ID: 0108000600018a9200a0000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <value: 707db9b84daf=""> Agent Remote TD: 707db9b84daf</value:>
<pre><value: 0100000000000104320000000000000000000000<="" td=""><td>Agent Circuit ID: 0108000600018a320000000000 • Option & Suboption: (2) Agent Remote ID Length: 6 • <value: 707db984daf=""> Agent Remote ID: 707db984daf • Option & Suboption: (151) VBE name/VBM ID</value:></td></value:></pre>	Agent Circuit ID: 0108000600018a320000000000 • Option & Suboption: (2) Agent Remote ID Length: 6 • <value: 707db984daf=""> Agent Remote ID: 707db984daf • Option & Suboption: (151) VBE name/VBM ID</value:>
<pre><value: bloowbookbladzobadowookbookbookbookbookbookbookbookbookboo<="" td=""><td>Agent Circuit ID: 0108000600018a9200a0000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <value: 707db9b8ddaf=""> Agent Remote ID: 707db9b8ddaf V Option 82 Suboption: (151) VRF name/VPN ID</value:></td></value:></pre>	Agent Circuit ID: 0108000600018a9200a0000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <value: 707db9b8ddaf=""> Agent Remote ID: 707db9b8ddaf V Option 82 Suboption: (151) VRF name/VPN ID</value:>
<pre><value: 010000000000103220000000000000000000000<="" td=""><td>Agent Lircuit ID: 0108000600018a92000000000 Option & Suboption: (2) Agent Remote ID Length: 6 <value: 707db98ddaf=""> Agent Remote ID: 707db98ddaf Option 82 Suboption: (151) VRF name/VPN ID Length: 9</value:></td></value:></pre>	Agent Lircuit ID: 0108000600018a92000000000 Option & Suboption: (2) Agent Remote ID Length: 6 <value: 707db98ddaf=""> Agent Remote ID: 707db98ddaf Option 82 Suboption: (151) VRF name/VPN ID Length: 9</value:>
<pre><value: 0100000000001043200000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060018a32000000000 Option & Suboption: (2) Agent Remote ID Length: 6 -<value: 707d59084daf=""> Agent Remote ID: 707d59084daf Option & Suboption: (151) VRF name/VPN ID Length: 9 -<value: 00745566616742d61=""></value:></value:></td></value:></pre>	Agent Circuit ID: 010800060018a32000000000 Option & Suboption: (2) Agent Remote ID Length: 6 - <value: 707d59084daf=""> Agent Remote ID: 707d59084daf Option & Suboption: (151) VRF name/VPN ID Length: 9 -<value: 00745566616742d61=""></value:></value:>
<pre><value: 0100000000000000000000000000000000000<="" td=""><td>Agent Lircuit ID: 0108000600018a92000000000 Option & Suboption: (2) Agent Remote ID Length: 6 <value: 707db908ddaf=""> Agent Remote ID: 707db908ddaf Option & Suboption: (151) VRF name/VPN ID Length: 9 <value: 007465666166742d61=""> VRF name:</value:></value:></td></value:></pre>	Agent Lircuit ID: 0108000600018a92000000000 Option & Suboption: (2) Agent Remote ID Length: 6 <value: 707db908ddaf=""> Agent Remote ID: 707db908ddaf Option & Suboption: (151) VRF name/VPN ID Length: 9 <value: 007465666166742d61=""> VRF name:</value:></value:>
<pre><value: 010000000000103220000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060001832000000000 Option & Suboption: (2) Agent Remote ID Length: 6 <v3lue: 707d09084daf=""> Agent Remote ID: 707d09084daf> Option & Suboption: (151) VRF name/VPN ID Length: 9 <value: 00745566616c742d61=""> VRF name:</value:></v3lue:></td></value:></pre>	Agent Circuit ID: 010800060001832000000000 Option & Suboption: (2) Agent Remote ID Length: 6 <v3lue: 707d09084daf=""> Agent Remote ID: 707d09084daf> Option & Suboption: (151) VRF name/VPN ID Length: 9 <value: 00745566616c742d61=""> VRF name:</value:></v3lue:>
<pre><value: 0100000000000000000000000000000000000<="" td=""><td>Agent Circuit ID: 0108000600018392000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <value: 707db908ddaf=""> Agent Remote ID: 707db908ddaf Option 82 Suboption: (131) VMF name/VPN ID Length: 9 <value: 00746566616674261=""> VWF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4</value:></value:></td></value:></pre>	Agent Circuit ID: 0108000600018392000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <value: 707db908ddaf=""> Agent Remote ID: 707db908ddaf Option 82 Suboption: (131) VMF name/VPN ID Length: 9 <value: 00746566616674261=""> VWF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4</value:></value:>
<pre><value: 0100000000001043200000000000000000000000<="" td=""><td>Agent Circuit ID: 0108000600018a3200a0000000 • Option & Suboption: (2) Agent Remote ID Length: 6 • <value: 707d9b84daf=""> Agent Remote ID: 707d9b84daf • Option & Suboption: (151) VRF name/VPN ID Length: 9 • <value: 00746566616742d61=""> • VRF name: • Option & Suboption: (11) Server ID Override (10.10.10.1) Length: 4 • <value: 0.00000000000000000000000000000000000<="" td=""></value:></value:></value:></td></value:></pre>	Agent Circuit ID: 0108000600018a3200a0000000 • Option & Suboption: (2) Agent Remote ID Length: 6 • <value: 707d9b84daf=""> Agent Remote ID: 707d9b84daf • Option & Suboption: (151) VRF name/VPN ID Length: 9 • <value: 00746566616742d61=""> • VRF name: • Option & Suboption: (11) Server ID Override (10.10.10.1) Length: 4 • <value: 0.00000000000000000000000000000000000<="" td=""></value:></value:></value:>
<pre><value: 0100000000000000000000000000000000000<="" td=""><td>Agent Lircuit ID: 0108000600018032000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <value: 7070b9084daf=""> Agent Remote ID: 707db9084daf Option 82 Suboption: (151) VKF name/VPN ID Length: 9 <value: 00746566616674261=""> VKF name: Option 82 Suboption: (11) Server ID Override (10.10.10) Length: 4 <value: 00408001=""></value:></value:></value:></td></value:></pre>	Agent Lircuit ID: 0108000600018032000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <value: 7070b9084daf=""> Agent Remote ID: 707db9084daf Option 82 Suboption: (151) VKF name/VPN ID Length: 9 <value: 00746566616674261=""> VKF name: Option 82 Suboption: (11) Server ID Override (10.10.10) Length: 4 <value: 00408001=""></value:></value:></value:>
<pre><value: 0100000000001043200000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060001832000000000 Option & Suboption: (2) Agent Remote ID Length: 6 <</td> Agent Remote ID: 707d95084daf> Agent Remote ID: 707d95084daf Option & Suboption: (11) VRF name/VPN ID Length: 9</value:></pre>	Agent Circuit ID: 010800060001832000000000 Option & Suboption: (2) Agent Remote ID Length: 6 <
<pre><value: 0100000000010432000000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060018a3200a0000000 Option & Suboption: (2) Agent Remote ID Length: 6 - - Agent Remote ID: 707d9b98daf> Agent Remote ID: 707d9b98daf> -</td></value:></pre>	Agent Circuit ID: 010800060018a3200a0000000 Option & Suboption: (2) Agent Remote ID Length: 6 - - Agent Remote ID: 707d9b98daf> Agent Remote ID: 707d9b98daf> -
<pre><value: 010000000000103200000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060001832000000000 Option & S Suboption: (2) Agent Remote ID Length: 6 Agent Remote ID: 707d09b8daf> Agent Remote ID: 707d09b8daf> Option & S Suboption: (151) VKF name/VFN ID Length: 9 >/WF name: >/WF name: >/UPT name: >/Uption & S Suboption: (11) Server ID Override (10.10.10.1) Length: 4 - - >/Wer name: > >/Uption & S Suboption: (11) Server ID Override (10.10.10.1) Length: 4 - - >/Vertide: 10.10.1 Option & S Suboption: (5) Link selection (10.10.0) Length: 4 -</td></value:></pre>	Agent Circuit ID: 010800060001832000000000 Option & S Suboption: (2) Agent Remote ID Length: 6 Agent Remote ID: 707d09b8daf> Agent Remote ID: 707d09b8daf> Option & S Suboption: (151) VKF name/VFN ID Length: 9 >/WF name: >/WF name: >/UPT name: >/Uption & S Suboption: (11) Server ID Override (10.10.10.1) Length: 4 - - >/Wer name: > >/Uption & S Suboption: (11) Server ID Override (10.10.10.1) Length: 4 - - >/Vertide: 10.10.1 Option & S Suboption: (5) Link selection (10.10.0) Length: 4 -
<pre><value: 0100000000001043200000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060018a3200a0000000 Option & Suboption: (2) Agent Remote ID Length: 6 Agent Remote ID: 707d09b84daf> Agent Remote ID: 707d09b84daf Option & Suboption: (151) VRF name/VPN ID Length: 9 VRF name: Option & Suboption: (11) Server ID Override (10.10.10.1) Length: 4 Server ID Override: 10.10.10. Server ID Override: 10.10.10. Length: 4 Option & Suboption: (15) Link selection (10.10.10.0) Length: 4</td></value:></pre>	Agent Circuit ID: 010800060018a3200a0000000 Option & Suboption: (2) Agent Remote ID Length: 6 Agent Remote ID: 707d09b84daf> Agent Remote ID: 707d09b84daf Option & Suboption: (151) VRF name/VPN ID Length: 9 VRF name: Option & Suboption: (11) Server ID Override (10.10.10.1) Length: 4 Server ID Override: 10.10.10. Server ID Override: 10.10.10. Length: 4 Option & Suboption: (15) Link selection (10.10.10.0) Length: 4
<pre><value: 0100000000001263200000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060001832000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Comption 82 Suboption: (151) VKF name/VPM ID Length: 9 <pre><value: 00="" 4656e616e742d61=""> > VWF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 <pre><value: 00="" 4656e616e742d61=""> > UKF name: Option 82 Suboption: (1) Server ID Override (10.10.10.1) Length: 4 <pre><value: 00="" 4656e616e742d61=""> Server ID Override: 10.10.10.1 Option 82 Suboption: (5) Link selection (10.10.10.0) Length: 4 <pre><value: 00="" 4604000<="" pre=""></value:></pre></value:></pre></value:></pre></value:></pre></pre></td></value:></pre>	Agent Circuit ID: 010800060001832000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Comption 82 Suboption: (151) VKF name/VPM ID Length: 9 <pre><value: 00="" 4656e616e742d61=""> > VWF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 <pre><value: 00="" 4656e616e742d61=""> > UKF name: Option 82 Suboption: (1) Server ID Override (10.10.10.1) Length: 4 <pre><value: 00="" 4656e616e742d61=""> Server ID Override: 10.10.10.1 Option 82 Suboption: (5) Link selection (10.10.10.0) Length: 4 <pre><value: 00="" 4604000<="" pre=""></value:></pre></value:></pre></value:></pre></value:></pre></pre>
<pre><value: 010000000000103220000000000000000000000<="" td=""><td>Agent Circuit ID: 0108000600018320000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Compatibility of the second second</pre></td></value:></pre>	Agent Circuit ID: 0108000600018320000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Compatibility of the second second</pre>
<pre><value: 010000000001030200000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060001832000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Comption 82 Suboption: (151) VKF name/VPM ID Length: 9 <pre><value: 007465666166742661=""> > VKF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 <pre><value: 00465666166742661=""> > UKF name: Option 82 Suboption: (1) Server ID Override (10.10.10.1) Length: 4 <pre><value: 004080401<="" pre=""> <pre>Server ID Override: 10.10.10</pre> <pre>Option 82 Suboption: (5) Link selection (10.10.10.0) Length: 4 <pre><value: 0040804005<="" pre=""> Link selection: 10.10.10.0</value:></pre></pre></value:></pre></value:></pre></value:></pre></pre></td></value:></pre>	Agent Circuit ID: 010800060001832000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Comption 82 Suboption: (151) VKF name/VPM ID Length: 9 <pre><value: 007465666166742661=""> > VKF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 <pre><value: 00465666166742661=""> > UKF name: Option 82 Suboption: (1) Server ID Override (10.10.10.1) Length: 4 <pre><value: 004080401<="" pre=""> <pre>Server ID Override: 10.10.10</pre> <pre>Option 82 Suboption: (5) Link selection (10.10.10.0) Length: 4 <pre><value: 0040804005<="" pre=""> Link selection: 10.10.10.0</value:></pre></pre></value:></pre></value:></pre></value:></pre></pre>
<pre><value: 010000000001032000000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060001832000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Compatibility of the system of the system</pre></td></value:></pre>	Agent Circuit ID: 010800060001832000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Compatibility of the system of the system</pre>
<pre> value: 010000000001043200000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6</pre>	Agent Circuit ID: 010800060018a2000a0000000 • Option & Suboption: (2) Agent Remote ID Length: 6 • <value: 707d9b984daf=""> Agent Remote ID: 707d9b984daf • Option & Suboption: (151) VKF name/VPN ID Length: 9 • <value: 007465666166742d61=""> • VKF name: • Option & Suboption: (11) Server ID Override (10.10.10.1) Length: 4 • <value: 000406566166742d61=""> • Server ID Override: 10.10.10. • Option & Suboption: (5) Link selection (10.10.00) Length: 4 • <value: 0004000-<br="">Link selection: 10.10.10.0 • Option Ed: 255</value:></value:></value:></value:>
<pre><value: 0100000000001263200000000000000000000000<="" td=""><td>Agent Circuit ID: 0108000600018320000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Compatibility of the state of the</pre></td></value:></pre>	Agent Circuit ID: 0108000600018320000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Compatibility of the state of the</pre>
<pre>kyalu: 010000000001032000000000000000000000000</pre>	Agent Circuit ID: 010800060018a2000a0000000 • Option 82 Suboption: (2) Agent Remote ID Length: 6 • <value: 707d9b984daf=""> Agent Remote ID: 707d9b984daf • Option 82 Suboption: (151) VAF name/VPN ID Length: 9 • <value: 007465666166742d61=""> • VAF name: • Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 • <value: 004064001=""> Server ID Override: 10.10.10. • Option (25) Link selection (10.10.10.0) Link selection: 10.10.10.0 • Option Ed: 255</value:></value:></value:>
<pre><value: 0100000000012632000000000000000000000000<="" td=""><td>Agent Circuit ID: 0108000600018320000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre></td></value:></pre>	Agent Circuit ID: 0108000600018320000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre>
<pre><value: 010000000001032200000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060018a2000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>/// Content 20: 707d09084daf> Agent Remote ID: 707d09084daf Option 82 Suboption: (1151) VRF name/VPN ID Length: 9 <pre>// VRF name: // Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 <pre>// Alue: 000408da0b> Server ID Override: 10.10.10.10 // Option (25) Link selection (10.10.10.0) Length: 4 <pre>// Alue: 0004080b> Link selection: 10.10.10.0 // Option Ed: 255</pre></pre></pre></pre></td></value:></pre>	Agent Circuit ID: 010800060018a2000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>/// Content 20: 707d09084daf> Agent Remote ID: 707d09084daf Option 82 Suboption: (1151) VRF name/VPN ID Length: 9 <pre>// VRF name: // Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 <pre>// Alue: 000408da0b> Server ID Override: 10.10.10.10 // Option (25) Link selection (10.10.10.0) Length: 4 <pre>// Alue: 0004080b> Link selection: 10.10.10.0 // Option Ed: 255</pre></pre></pre></pre>
<pre><value: 0100000000012632000000000000000000000000<="" td=""><td>Agent Circuit ID: 010800060001832000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Content Remote ID: 797d9b98daf> Option 82 Suboption: (151) VRF name/VFN ID Length: 9 <pre><pre></pre> <pre></pre> <pre>/value: 007465666166742d61> <pre>VRF name: <pre>Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 <pre><pre><pre><pre>/value: 007465666166742d61> <pre>> VRF name: <pre>Option 82 Suboption: (15) Link selection (10.10.10.1) Length: 4 <pre><pre><pre>/value: 0074671d8: 10.10.10 <pre>Option 82 Suboption: (5) Link selection (10.10.00) Length: 4 <pre>/value: 0074671d8: 10.10.10.00 <pre>/value: 0074671d8: 10.10.10.00 <pre>/value: 0074671d8: 10.10.10.00</pre> </pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></td></value:></pre>	Agent Circuit ID: 010800060001832000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <pre></pre> <pre>Content Remote ID: 797d9b98daf> Option 82 Suboption: (151) VRF name/VFN ID Length: 9 <pre><pre></pre> <pre></pre> <pre>/value: 007465666166742d61> <pre>VRF name: <pre>Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 <pre><pre><pre><pre>/value: 007465666166742d61> <pre>> VRF name: <pre>Option 82 Suboption: (15) Link selection (10.10.10.1) Length: 4 <pre><pre><pre>/value: 0074671d8: 10.10.10 <pre>Option 82 Suboption: (5) Link selection (10.10.00) Length: 4 <pre>/value: 0074671d8: 10.10.10.00 <pre>/value: 0074671d8: 10.10.10.00 <pre>/value: 0074671d8: 10.10.10.00</pre> </pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>
<pre>^value: 0100000000012832000000000000000000000000</pre>	Agent Circuit ID: 01080006001832000000000 • Option 82 Suboption: (2) Agent Remote ID Length: 6 • <value: 707d9b84daf=""> Agent Remote ID: 707d9b84daf • Option 82 Suboption: (1151) VRF name/VPN ID Length: 9 • <value: 007465660166742061=""> • VRF name: • Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 • <value: 000406401=""> Server ID Override: 10.10.10.10 • Option 82 Suboption: (5) Link selection (10.10.00) Length: 4 • <value: 0004000=""> Link selection: 10.10.10.00 • Option End: 255</value:></value:></value:></value:>

Offerta DHCP su LEAF-1

Offerta ricevuta su LEAF-1	Invio offerta su FOGLIA-1
----------------------------	---------------------------

	<pre>> Ethernet II, Src: 70:7d:b9:b8:4d:af, Dst: ff:ff:ff:ff:ff:ff</pre>
	> Internet Protocol Version 4, Src: 10.10.10.1, Dst: 255.255.255.255
Ethernet II, Src: 10:b3:d6:a4:85:97, Dst: 70:7d:b9:b8:4d:af Internet Protocol Version 4, Src: 13,13,13,254, Dst: 5,5,5,5	> User Datagram Protocol, Src Port: 67, Dst Port: 68
User Datagram Protocol, Src Port: 65518, Dst Port: 4789	 Dynamic Host Configuration Protocol (Offer)
Virtual eXtensible Local Area Network	Message type: Boot Renly (2)
Group Policy ID: 0	Hardware type: Ethernet (0x01)
VXLAN Network Identifier (VNI): 303030	Hardware cype. Ethernet (0.01)
keserved: 0 Ethernet II. Src: 02:00:0d:0d:0d:0d:fe. Dst: 70:7d:b9:b8:4d:af	nardware address tength; o
Internet Protocol Version 4, Src: 10.10.10.150, Dst: 172.16.10.8	Hops: 0
Diser Datagram Protocol, Src Port: 67, Dst Port: 67	Transaction ID: 0xe9e35087
Message type: Boot Reply (2)	Seconds elapsed: 0
Hardware type: Ethernet (0x01)	> Bootp flags: 0x8000, Broadcast flag (Broadcast)
Hops: 0	Client IP address: 0.0.0.0
Transaction ID: 0xe9e35087	Your (client) IP address: 10.10.10.3
Seconds elapsed: 0 > Bootp flags: 0x8000. Broadcast flag (Broadcast)	Next server TP address: 10 10 10 150
Client IP address: 0.0.0.0	Delay agent ID address: 10.10.10.100
Your (client) IP address: 10.10.10.3 Next server IP address: 10.10.10.3	Retay agent IP address: 10.10.10.1
Relay agent IP address: 172.16.10.8	Client MAC address: 00:50:56:a5:Td:dd
Client MAC address: 00:50:56:a5:fd:dd	Client hardware address padding: 0000000000000000000
Server host name not given	Server host name not given
Boot file name not given	Boot file name not given
 Option: (53) DHCP Message Type (Offer) 	Magic cookie: DHCP
Length: 1	Option: (53) DHCP Message Type (Offer)
<value: 02=""> DHCP: Offer (2)</value:>	length: 1
<pre>> Option: (1) Subnet Mask (255.255.0)</pre>	
Length: 4 <value: ffffff00=""></value:>	Nature, 022
Subnet Mask: 255.255.25.0	DHCP: UTTER (2)
Option: (58) Renewal Time Value Length: 4	<pre>v Uption: (1) Subnet Mask (255.255.255.0)</pre>
<value: 0000a8c0=""></value:>	Length: 4
Renewal Time Value: 12 hours (43200)	<value: ffffff00=""></value:>
Length: 4	Subnet Mask: 255.255.255.0
<value: 00012750=""> Rebinding Time Value: 21 hours (75600)</value:>	Option: (58) Renewal Time Value
Option: (51) IP Address Lease Time	Length: 4
Length: 4	<value: 0000a8c0=""></value:>
IP Address Lease Time: 1 day (86400)	Renewal Time Value: 12 hours (43200)
<pre>> Option: (54) DHCP Server Identifier (10.10.10.1) length: 4</pre>	Option: (59) Rebinding Time Value
<value: 0a0a0a01=""></value:>	length: 4
DHCP Server Identifier: 10.10.10.1	
Length: 10	Rehinding Time Value: 21 hours (75600)
<value: 636973636f2e636f6d00=""></value:>	Option: (51) TR Address Lesse Time
<pre>> Option: (82) Agent Information Option</pre>	v option: (51) IP Address Lease Time
Length: 47	Length: 4
 <value: 0100010000000000000000000000000000000<="" td=""><td><value: 00015180=""></value:></td></value:>	<value: 00015180=""></value:>
Length: 14	IP Address Lease Time: 1 day (86400)
<value: 0100000000018392000000000000000000000000000000000000<="" td=""><td>Option: (54) DHCP Server Identifier (10.10.10.1)</td></value:>	Option: (54) DHCP Server Identifier (10.10.10.1)
 Option 82 Suboption: (2) Agent Remote ID 	Length: 4
Length: 6 <value: 707db9b84daf=""></value:>	<value: 0a0a0a01=""></value:>
Agent Remote ID: 707db9b84daf	DHCP Server Identifier: 10.10.10.1
Option 82 Suboption: (151) VRF name/VPN ID Length: 9	<pre>v Option: (3) Router</pre>
<value: 0074656e616e742d61=""></value:>	Length: 4
VRF name: Ontion 82 Subortion: (11) Server ID Override (10.10.10.1) 	<value: 0a0a0a01=""></value:>
Length: 4	Bouter: 10 10 10 1
<value: 0a0a0a01=""> Server ID Override: 10.10.10.1</value:>	Ontions (15) Domain Namo
 Option 82 Suboption: (5) Link selection (10.10.10.0) 	v option: (15) Domain Name
Length: 4	Length: 10
Link selection: 10.10.10.0	<value: 636973636f2e636f6d00=""></value:>
• Option: (255) End Option End: 255	Domain Name: cisco.com
option indi 200	Option: (255) End
	Option End: 255

Offerta DHCP ricevuta su HOST-1

```
> Ethernet II, Src: 70:7d:b9:b8:4d:af, Dst: ff:ff:ff:ff:ff:ff
> Internet Protocol Version 4, Src: 10.10.10.1, Dst: 255.255.255.255
> User Datagram Protocol, Src Port: 67, Dst Port: 68

    Dynamic Host Configuration Protocol (Offer)

   Message type: Boot Reply (2)
   Hardware type: Ethernet (0x01)
   Hardware address length: 6
   Hops: 0
   Transaction ID: 0xe9e35087
    Seconds elapsed: 0
  > Bootp flags: 0x8000, Broadcast flag (Broadcast)
    Client IP address: 0.0.0.0
    Your (client) IP address: 10.10.10.3
   Next server IP address: 10.10.10.150
   Relay agent IP address: 10.10.10.1
    Client MAC address: 00:50:56:a5:fd:dd
    Client hardware address padding: 0000000000000000000
    Server host name not given
    Boot file name not given
   Magic cookie: DHCP

    Option: (53) DHCP Message Type (Offer)

      Length: 1
      <Value: 02>
      DHCP: Offer (2)

    Option: (1) Subnet Mask (255.255.255.0)

      Length: 4
      <Value: ffffff00>
      Subnet Mask: 255.255.255.0

    Option: (58) Renewal Time Value

      Length: 4
      <Value: 0000a8c0>
      Renewal Time Value: 12 hours (43200)
 Option: (59) Rebinding Time Value
      Length: 4
      <Value: 00012750>
      Rebinding Time Value: 21 hours (75600)
 v Option: (51) IP Address Lease Time
      Length: 4
      <Value: 00015180>
      IP Address Lease Time: 1 day (86400)
 v Option: (54) DHCP Server Identifier (10.10.10.1)
      Length: 4
      <Value: 0a0a0a01>
      DHCP Server Identifier: 10.10.10.1
 Option: (3) Router
      Length: 4
      <Value: 0a0a0a01>
      Router: 10.10.10.1

    Option: (15) Domain Name

      Length: 10
      <Value: 636973636f2e636f6d00>
      Domain Name: cisco.com

    Option: (255) End

      Option End: 255
```

Richiesta inviata da HOST-1

```
Ethernet II, Src: 00:50:56:a5:fd:dd, Dst: ff:ff:ff:ff:ff:ff
 Internet Protocol Version 4, Src: 0.0.0.0, Dst: 255.255.255.255
 User Datagram Protocol, Src Port: 68, Dst Port: 67

    Dynamic Host Configuration Protocol (Request)

   Message type: Boot Request (1)
   Hardware type: Ethernet (0x01)
   Hardware address length: 6
   Hops: 0
   Transaction ID: 0xe9e35087
   Seconds elapsed: 0

    Bootp flags: 0x8000, Broadcast flag (Broadcast)

     1... .... = Broadcast flag: Broadcast
      .000 0000 0000 0000 = Reserved flags: 0x0000
   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: 00:50:56:a5:fd:dd
   Client hardware address padding: 0000000000000000000
   Server host name not given
   Boot file name not given
   Magic cookie: DHCP

    Option: (53) DHCP Message Type (Request)

     Length: 1
     <Value: 03>
     DHCP: Request (3)
 Option: (61) Client identifier
     Length: 7
     <Value: 01005056a5fddd>
     Hardware type: Ethernet (0x01)
     Client MAC address: 00:50:56:a5:fd:dd
 Option: (50) Requested IP Address (10.10.10.3)
     Length: 4
     <Value: 0a0a0a03>
     Requested IP Address: 10.10.10.3

    Option: (54) DHCP Server Identifier (10.10.10.1)

     Length: 4
     <Value: 0a0a0a01>
     DHCP Server Identifier: 10.10.10.1

    Option: (12) Host Name

     Length: 10
     <Value: 43584c6162732d573130>
     Host Name: CXLabs-W10
 Option: (81) Client Fully Qualified Domain Name
     Length: 13
     <Value: 00000043584c6162732d573130>

    Flags: 0x00

        0000 .... = Reserved flags: 0x0
        .... 0... = Server DDNS: Some server updates
        .... .0.. = Encoding: ASCII encoding
        .... ..0. = Server overrides: No override
        .... ...0 = Server: Client
     A-RR result: 0
     PTR-RR result: 0
     Client name: CXLabs-W10
  Option: (60) Vendor class identifier
      Length: 8
      <Value: 4d53465420352e30>
      Vendor class identifier: MSFT 5.0

    Option: (55) Parameter Request List

      Length: 14
      <Value: 0103060f1f212b2c2e2f7779f9fc>
      Parameter Request List Item: (1) Subnet Mask
      Parameter Request List Item: (3) Router
      Parameter Request List Item: (6) Domain Name Server
      Parameter Request List Item: (15) Domain Name
      Parameter Request List Item: (31) Perform Router Discover
      Parameter Request List Item: (33) Static Route
      Parameter Request List Item: (43) Vendor-Specific Information
      Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server
      Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type
      Parameter Request List Item: (47) NetBIOS over TCP/IP Scope
      Parameter Request List Item: (119) Domain Search
      Parameter Request List Item: (121) Classless Static Route
      Parameter Request List Item: (249) Private/Classless Static Route (Microsoft)
      Parameter Request List Item: (252) Private/Proxy autodiscovery

    Option: (255) End

      Option End: 255
```

Richiesta su FOGLIA-1

Richiesta ricevuta su LEAF-1	Richiesta inviata da LEAF-1
 Ethernet II, Src: 00:50:56:a5:fd:dd, Dst: ff:ff:ff:ff:ff:ff Internet Protocol Version 4, Src: 0.0.0.0, Dst: 255.255.255.255 User Datagram Protocol, Src Port: 68, Dst Port: 67 	Ethermet II, Src: 78:7d:09:08:4diaf, Dst: 10:03:06:04:68:97 Internet Protocol Version 4, Src: 5.5.5, Dst: 13.13.13.254 User Datagram Protocol, Src Port: 51730, Dst Port: 4789 Virtual eXtensible Local Area Network Elancs: Braßba. VXLAM.Network 10 (VMI)
 Dynamic Host Configuration Protocol (Request) Message type: Boot Request (1) 	Group Policy ID: 0 WXLAW Network Identifier (VNI): 303030
Hardware type: Ethernet (0x01)	Reserved: 0 > Ethernet II, Src: 70:7d:b9:b8:4d:af, Dst: 02:00:0d:0d:0d:fe
Hops: 0	 Internet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.10.150 User Datagram Protocol, Src Port: 67, Dst Port: 67
Transaction ID: 0xe9e35087	 Dynamic Host Configuration Protocol (Request) Message type: Boot Request (1)
Seconds etapsed: 0 Bootp flags: 0x8000, Broadcast flag (Broadcast)	Hardware type: Ethernet (0x01) Hardware address length: 6
1 = Broadcast flag: Broadcast	Hops: 1 Transaction ID: 0xe9e35087
Client IP address: 0.0.0.0	Seconds elapsed: 0 > Bootp flags: 0x8000, Broadcast flag (Broadcast)
Your (client) IP address: 0.0.0.0 Next server IP address: 0.0.0.0	Client IP address: 0.0.0.0 Your (client) IP address: 0.0.0.0
Relay agent IP address: 0.0.0.0	Next server IP address: 0.0.00 Relay agent IP address: 172.16.10.8
Client MAC address: 00:50:56:a5:fd:dd Client hardware address padding: 000000000000000000000	Client MAC address: 00:50:56:a5:fd:dd Client hardware address padding: 000000000000000000
Server host name not given	Server host name not given Boot file name not given
Boot file name not given Magic cookie: DHCP	Magic cookie: DHCP © Option: (53) DHCP Message Type (Request)
 Option: (53) DHCP Message Type (Request) 	Length: 1 <value: 03=""></value:>
<value: 03=""></value:>	DHCP: Request (3) ~ Option: (61) Client identifier
DHCP: Request (3)	Length: 7 <value: 01005056a5fddd=""></value:>
Length: 7	Mardware type: Ethernet (0x01) Client MAC address: 00:50:56:a5:fd:dd
<value: 01005056a5fddd=""> Hardware type: Ethernet (0x01)</value:>	<pre>> Uption: (50) Requested iP Address (10.10.10.3) Length: 4 </pre>
Client MAC address: 00:50:56:a5:fd:dd	<volue: teatadadad="">> Requested IP Address: 10.10.10.3</volue:>
 Option: (50) Requested IP Address (10.10.10.3) Length: 4 	Coption: (54) bHCP Server Identifier (10.10.10.150) Length: 4
<value: 0a0a0a03=""></value:>	<volue: woododogo<br="">DHCP Server Identifier: 10.10.10.150</volue:>
Requested IP Address: 10.10.10.3 v Option: (54) DHCP Server Identifier (10.10.10.1)	v oprion: 112/ Most Name Length: 10 v/blue: 4564/61623234573120-
Length: 4	Nost Name: CXLabs-W10
<value: 0a0a0a01=""> DHCP Server Identifier: 10.10.10.1</value:>	Length: 13
Option: (12) Host Name	> Flags: 0x000
<value: 43584c6162732d573130=""></value:>	PTR-RR result: 0
Host Name: CXLabs=W10	v Option: (60) Vendor class identifier
Length: 13	<pre><value: 4d53465420352e30=""> Vandor class identifier: MSET 5.0</value:></pre>
<value: 00000043584c6162732d573130=""></value:>	 Option: (55) Parameter Request List Length: 14
0000 = Reserved flags: 0x0	<pre><value: 0103060f1f212b2c2e2f7779f9fc=""> Parameter Request List Trans (1) Submet Mask</value:></pre>
<pre> 0 = Server DDNS: Some server updates 0 = Encoding: ASCII encoding</pre>	Parameter Request List Item: (3) Router Parameter Request List Item: (6) Domain Name Server
0. = Server overrides: No override	Parameter Request List Item: (15) Domain Name Parameter Request List Item: (31) Perform Router Discover
A-RR result: 0	Parameter Request List Item: (33) Static Route Parameter Request List Item: (43) Vendor-Specific Information
PTR-RR result: 0	Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server Parameter Request List Item: (46) NetBIOS over TCP/IP Nade Type
 Option: (60) Vendor class identifier 	Parameter Request List Item: (47) NetBIOS over TCP/IP Scope Parameter Request List Item: (119) Domain Search
Length: 8	Parameter Request List Item: (121) Classless Static Route Parameter Request List Item: (249) Private/Classless Static Route (Microsoft)
Vendor class identifier: MSFT 5.0	Parameter Request List Item: (252) Private/Proxy autodiscovery Option: (82) Agent Information Option
 Option: (55) Parameter Request List Length: 14 	Length: 47
<value: 0103060f1f212b2c2e2f7779f9fc=""></value:>	Option 82 Suboption: (1) Agent Circuit ID Length: 14
Parameter Request List Item: (1) Subnet Mask Parameter Request List Item: (3) Router	≪Value: 0108000500018a9200a000000000> Agent Circuit ID: 0108006600018a9200a00000000
Parameter Request List Item: (6) Domain Name Server	 Option 82 Suboption: (2) Agent Remote ID Length: 6
Parameter Request List Item: (15) Domain Name Parameter Request List Item: (31) Perform Router Discover	≪Value: 707db9b84daf> Agent Remote ID: 707db9b84daf
Parameter Request List Item: (33) Static Route	 Option 82 Suboption: (151) VRF name/VPN ID Length: 9
Parameter Request List Item: (43) Vendor-Specific Information Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server	<value: 0874656c616c742d61=""> v VRF name:</value:>
Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type	> [Expert Info (Warning/Undecoded): Trailing stray characters]
Parameter Request List Item: (47) WetBlub Over TCP/IP Scope Parameter Request List Item: (119) Domain Search	Length: 4 <value: 0a0a0a01=""></value:>
Parameter Request List Item: (121) Classless Static Route	Server ID Override: 10.10.10.1 ~ Option 82 Suboption: (5) Link selection (10.10.10.0)
Parameter Request List Item: (252) Private/Proxy autodiscovery	Length: 4 <value: 0a0a0a00=""></value:>
 Option: (255) End Option End: 255 	Link selection: 10.10.10.0 v Option: (255) End
option bliff baa	Option End: 255

Richiesta sul dorso

Richiesta ricevuta su SPINE	Richiesta inviata da SPINE
-----------------------------	----------------------------

Ethernet II, Src: 70:7d:D9:b8:4d:af, Dst: 10:b3:d6:a4:85:97 Internet Protocol Version 4, Src: 5.5.5, Dst: 13.13.13.254 User Datagram Protocol, Src Port: 51730, Dst Port: 4789 Virtual eXtensible Local Area Network - Flags: 0x0000, VXLNN Network ID (WI) Group Policy ID: 0 VXLNN Network Identifier (WI): 303030 Reserved: 0 VALWW RETWOR A USERVATURE 1111 AND A CONSTRUCTION OF A CONSTRUCTIO Hops: 1 Seconds elapsed: 0 Bootp flags: 0x8800, Broadcast flag (Broadcast) Client IP address: 0.0.0.0 Next server IP address: 0.0.0.0 Relay agent IP address: 0.0.0.0 Relay agent IP address: 0.02.16.10.8 Client Mc address: 005/05/a5/fd/dd Seconds elapsed: 0 Client MAC address: 00:50:56:65:67:61:dd Client hardware address padding: 0000000000000000000 Server host name not given Boot file name not given Magic cookie: DHKP Option: (53) DHCP Message Type (Request) Length: 1 <Value: 03-> DHCP: Remust (3) DHCP: Request (3) Option: (61) Client identifier Length: 7 <Value: 010050056a5fddd> Hardware type: Ethernet (0x01) Client M& address: 00:50:56:a5:fd:dd Option: (50) Requested IP Address (10.10.10.3) ption: (50) Requested IP Address (10.10.10.3) Length: 4 <Value: 0000003> Requested IP Address: 10.10.10.3 ption: (54) DHCP Server Identifier (10.10.10.150) Length: 4 <Value: 0000005> DHCP Server Identifier: 10.10.10.150 Option: (12) Host Name Value: 43584c6162732d573138> Host Name: CXLabs-W10 Option: (81) Client Fully Qualified Domain Name Length: 13 <Value: 00000043584c6162732d573130> <Value: 00000043584c6162732d573130>
Flags: 0x00
A-RR result: 0
PTR-RR result: 0
Client name: CXLabs-W10
Option: (60) Vendor class identifier
Length: 8
<Value: 4d53465420352438>
Vendor Usi densitien WFFF E 0 Vendor class identifier: MSFT 5.0 Option: (55) Parameter Request List Tomor Coss Jackson Cossenses List Length: 14 «Value: 803860f1f212b2c2e2f7779f9fc> «Value: 803860f1f212b2c2e2f7779f9fc> Parameter Request List Item: (3) Bouter Parameter Request List Item: (3) Bouter Parameter Request List Item: (3) Bouter Parameter Request List Item: (3) Derform Router Discover Parameter Request List Item: (3) Derform Router Discover Parameter Request List Item: (3) Perform Router Discover Parameter Request List Item: (3) Perform Router Discover Parameter Request List Item: (3) Vendor-Specific Information Parameter Request List Item: (4) NetBIOS over TCP/IP Name Server Parameter Request List Item: (4) NetBIOS over TCP/IP Name Server Parameter Request List Item: (4) NetBIOS over TCP/IP Name Server Parameter Request List Item: (12) Itensless Static Route Parameter Request List Item: (12) Itensless Static Route (Microsoft) Parameter Request List Item: (22) Private/Classless Static Route (Microsoft) Parameter Request List Item: (22) Private/Classless Static Route (Microsoft) Parameter Request List Item: (22) Private/Proxy autodiscovery point: 47 «Value: 816e0188080660818a9208a8080000080286707db9b84daf97090074656e616e742d61 Lengtm: 47 <Value: 010e01080006600018a9200a000000000206707db9b84daf97090074656e616e742d610b640a0a0a0105040a0a0a00 Option 82 Suboption: (1) Agent Circuit ID uption &2 Suboption: (1) Agent Circuit II Length: 1080006000183220000000000 Agent Circuit ID: 0180006000183220000 Option &2 Suboption: (2) Agent Remote ID Length: 6 <Value: 707db9b04daf> Agent Remote ID: 707db9b84daf Option 82 Suboption: (151) VRF name/VPN ID Length: 9 <Value: 0074656e616e742d61> VRF name: > [Expert Info (Warning/Undecoded): Trailing stray characters] Option 82 Suboption: (11) Server ID Override (10.10.10.1)
 ption 82 Suboption: (11) Server ID Override (10.10. Length: 4 <Value: 000000> Server ID Override: 10.10.10.1 ption 82 Suboption: (5) Link selection (10.10.10.0) Length: 4 <Value: 0000000> Length: 4 <Value: 0a0a0a01> Link selection: 10.10.10.0 Optio Option: (255) End Option End: 255

Ethernet II, Src: 10:b3:d6:a4:85:97, Dst: 60:26:aa:85:95:87 Internet Protocol Version 4, Src: 5.5.5.5, Dst: 13.13.13.254 User Datagram Protocol, Src Port: 13/30, Dst Port: 4789 Virual eXtensible Local Area Network - Flags: 0x0806, VXLAN Network ID (VMI) Group Policy ID: 0 VXLAN Network Identifier (VMI): 303030 Reserved: 0 VXLAN Network Identifier (VMI): 303030 Reserved: 0 Ethernet II, Src: 70:7d;0b;0b;4d;ar, Dst: 02:00:0d:0d:0d;0d;1fe Internet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.150 User Datagram Protocol, Src: Port: 67, Dst Port: 67 Dymaic Host Configuration Protocol (Request) Message type: Boo Request (1) Hardware type: Ethernet (0x01) Hardware address length: 6 Hoos: 1 Transaction ID: 0xe9e35087 Transaction ID: 0x9953087 Seconds elapsed: 0 Bootp flags: 0x8080, Broadcast flag (Broadcast) Client IP address: 0.0.0 Next server IP address: 0.0.0 Next server IP address: 0.0.0 Relay agent IP address: 00:0056:a5fdrdd Client MAC address: 00:0056:a5fdrdd Client MAC address: 00:50:50:50:10:00 Client hardware address padding: 00000000 Server host name not given Boot file name not given Magic cookie: DHCP Option: (53) DHCP Message Type (Request) Length: 1 <Value: 03> DHCP. Remoter (3) <Value: 03>
DHCP: Request (3)
Option: (61) Client identifier
Length: 7
<Value: 01005056a5fddd>
Hardware type: Ethernet (0x01)
Client MAC address: 00185563a5fddd
Option: (50) Requested IP Address (10.10.10.3)
Length: 4 Option: (50) Requested IP Address (10.10.10.3) Length: 4 <Value: 0800808>> Requested IP Address: 10.10.10.3 Option: (54) DHCP Server Identifier (10.10.10.150) Length: 4 <Value: 08008096> DHCP Server Identifier: 10.10.10.150 Option: (12) Host Name Length: 0 Uption: 147 Length: 14 <Value: 43584c6162732d573130> Host Name: CXLabs=W10 Option: (81) Client Fully Qualified Domain Name Length: 13 <Value: 00000043584c6162732d573130> «Value: U0000043584cb102/32d3/31300 Flags: 00/00 A-RR result: 0 PTR-RR result: 0 Client name: CKLabs-W10 ption: (60) Vendor class identifier Length: 8 <Value: 4d53465420352e30> Vendor class identifier MEET 5 0 Vendor class identifier: MSFT 5.0 Option: (55) Parameter Request List Agent Remote ID: 707db9b84daf Option 82 Suboption: (151) VRF name/VPN ID Length: 9 <Value: 0074656e616e742d61> VRF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1) <Value: 0a0a0a01: Server ID Override: 10.10.10.1 Option 82 Suboption: (5) Link selection (10.10.10.0) Length: 4 <Value: 0a0a0a000-Link selection: 10.10.10.0 ption: (255) End

Richiesta su LEAF-2-vPC

Richiesta receivePCd su LEAF-2-vPC	Richiesta di invio tramite vPCAF-2-vPC
 Ethernet II, Src: 10:b3:d6:a4:85:97, Dst: 60:26:aa:85:95:87 Internet Protocol Version 4, Src: 5.5.5, Dst: 13.13.13.254 User Datagram Protocol, Src Port: S1738, Dst Port: 4789 Virtual eXtensible Local Area Network Flags: 0x8080, VXLAN Network ID (VNI) Group Policy ID: 0 	Ethernet II, Src: 60:26:aa:85:95:87, Dst: 00:50:56:a5:dc:ca Internet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.10.150
VXLNN Network Identifier (VNI): 303030 Reserved: 0 Ethernet II, Src: 70:7d1091084diaf, Dst: 02:0010d10d10d10d1fe Internet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.10.150 User Datagram Protocol, Src: Port: 67, Dst Port: 67 Domamic Host Configuration Protocol, (Remust)	User Datagram Protocol, Src Port: 67, Dst Port: 67 Dynamic Host Configuration Protocol (Request) Message type: Boot Request (1) Hardware address length: 6 Mons: 1
Message type: Boot Request (1) Hardware type: Ethernet (exAl) Hardware address length: 6 Hops: 1 Transaction ID: 0xe9e35087 Seconds elapsed: 0	Transaction ID: 0xe0e35087 Seconds etapsed: 0 > Bootp flags: 0x8000, Broadcast flag (Broadcast) Client IP address: 0.0.0.0 Your (client) IP address: 0.0.0.0 Next server IP address: 0.0.0.0
> Bootp flags: 0x8000, Broadcast flag (Broadcast) Client IP address: 0.0.0 Your (client) IP address: 0.0.0 Next server IP address: 0.0.0 Relay agent IP address: 172.16.10.0 Client MK address: 005:05:65:43:7f.dd	Relay agent IP address: 172.16.10.8 Client MAC address: 00:95:55:a5:7d:dd Client hardware address padding: 0000000000000000 Server host name not given Boot file name not given Magic cookie: DHCP
Client hardware address padding: 000000000000000000000000000000000000	<pre>> Option: (53) DHCP Message Type (Request) Length: 1 <value: 03=""> DHCP: Request (3) > Option: (61) Client identifier Length: 7</value:></pre>
<pre><value: 03=""> DHCP: Request (3) Option: (6) Ctlent identifier Length: 7 <value: 0100505605fddd=""> Hardware type: Ethernet (0x01)</value:></value:></pre>	<pre><value: 01005056a5="" ddd=""> Hardware type: Ethernet (0x01) Client MAC address: 00:50:56:a5:fd:dd Option: (50) Requested IP Address (10.10.10.3) Length: 4 <value: 00000003=""></value:></value:></pre>
Clent MAC address: 00:50:55:a3:fd:dd ○ Option: (50) Requested IP Address (10.00.10.3) Length: 4 <value: 00000003=""> Requested IP Address: 10.10.10.3 ○ Option: (54) DMC5 Sever Identifier (10.10.10.150)</value:>	Requested IP Address: 10.10.3 Option: (54) DHCF Server Identifier (10.10.10.150) Length: 4 <value: 80808056<br="">DHCF Server Identifier: 10.10.150 Option: (12) Host Name</value:>
Length: 4 <value: 00000096<br="">DNCP Server Identifier: 10.10.10.150 Option: 12) Host Name Length: 10 <value: 43584c6162732d573130=""></value:></value:>	Length: 10 ≺Value: 43584c6162732d573130≻ Host Name: CKLabs→H0 ○ Option: (81) Client Fully Qualified Domain Name Length: 13 ≺Value: 0000043584c6162732d573130≻
Host Name: CXLubs>+78 Option: (81) C(tiert Fully Qualified Domain Name Length: 13 <value: 00000043584c6162732d573130=""> > Flags: 0x00 A-RR, result: 0 </value:>	Flags: 0x00 A-RF result: 0 PTR-RF result: 0 Client name: CXLobS-W10 Option: (60) Vendor class identifier Lengit: 8
PTR-RR result: 0 Client name: CXL085-W10 • Option: (60) Vendor class identifier Length: 8 «Value: 4d534d5420352e30» Vendor class identifier: NSFT 5.0	<pre><value: 4d534d542d352e3a<br="">Vendor class identifier: MSFT 5.0 • Option: (55) Parameter Request List Length: 14 <value: 01830601f212b2c2e2f7779f9fc=""> Parameter Request List Item: (1) Submet Mask</value:></value:></pre>
 Option: (55) Parameter Request List Length: 14 <li< td=""><td>Parameter Request List Item: (3) Router Parameter Request List Item: (b) Domain Name Server Parameter Request List Item: (15) Domain Name Parameter Request List Item: (31) Perform Router Discover Parameter Request List Item: (33) Static Route Parameter Request List Item: (34) Vendor-Specific Information</td></li<>	Parameter Request List Item: (3) Router Parameter Request List Item: (b) Domain Name Server Parameter Request List Item: (15) Domain Name Parameter Request List Item: (31) Perform Router Discover Parameter Request List Item: (33) Static Route Parameter Request List Item: (34) Vendor-Specific Information
Parameter Request List Item: (15) Domain Name Parameter Request List Item: (31) Perform Router Discover Parameter Request List Item: (33) Static Route Parameter Request List Item: (43) Vendor-Specific Information Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type	Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type Parameter Request List Item: (47) NetBIOS over TCP/IP Scope Parameter Request List Item: (119) Domain Search Parameter Request List Item: (121) Classless Static Route Parameter Request List Item: (249) Private/Classless Static Route (Microsoft)
Parameter Request List Item: (47) NetBIOS over TCP/IP Scope Parameter Request List Item: (19) Domain Search Parameter Request List Item: (121) Classless Static Route Parameter Request List Item: (249) Private/Classless Static Route (Microsoft) Parameter Request List Item: (222) Private/Proxy autodiscovery © Option: (82) Agent Information Option	Parameter Request List Item: (252) Private/Proxy autodiscovery • Option: (82) Agent Information Option Length: 47 • Option 82 Suboption: (1) Agent Circuit ID Length: 14
Lengtn: 4/ elee018800600018392003000000000206787059584ds197090074656e616e742d6105040a0a0a0105040a0a000 option 82 Suboption: (1) Agent Circuit ID Length: 14 	<pre><value: #108000e0001839220000000000000<br="">Agent Circuit ID: 0108000E000183220000000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <value: 707049b84daf=""> Agent Remote ID: 707049b84daf</value:></value:></pre>
<pre>> Uption 82 Suboption: (2) Agent Remote 10 Length: 6 <value: 209584daf="" 70=""> Agent Remote 10: 70/209584daf > Option 82 Suboption: (151) VRF name/VPM ID</value:></pre>	 Option 82 Suboption: (151) VKF name/VVM 10 Length: 9 <value: 00746566166742d61=""></value:> VKF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1)
<pre>value: 007465666166742d61> VWF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 </pre>	Lengun ∀ Server ID Override: 10.10.10.1 • Option 82 Suboption: (5) Link selection (10.10.10.0) Length: 4
Server ID Override: 10.10.10. • Option 82 Suboption: (5) Link selection (10.10.00) Length: 4 • Link selection: 10.10.10.0 • Option: (255) End Option End: 255	Link selection: 10.10.10.0 Option: (255) End Option End: 255

Richiesta ricevuta sul server DHCP

Ethernet II, Src: 60:26:aa:85:95:87, Dst: 00:50:56:a5:dc:ca Internet Protocol Version 4, Src: 172.16.10.8, Dst: 10.10.10.150 User Datagram Protocol, Src Port: 67, Dst Port: 67 Dynamic Host Configuration Protocol (Request) Message type: Boot Request (1) Hardware type: Ethernet (0x01) Hardware address length: 6 Hons: 1 Transaction ID: 0xe9e35087 Seconds elapsed: 0 Bootp flags: 0x8000, Broadcast flag (Broadcast) 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: 172.16.10.8 Client MAC address: 00:50:56:a5:fd:dd Client hardware address padding: 00000000000000000000 Server host name not given Boot file name not given Magic cookie: DHCP Option: (53) DHCP Message Type (Request) Length: 1 <Value: 03> DHCP: Request (3) Option: (61) Client identifier Length: 7 <Value: 01005056a5fddd> Hardware type: Ethernet (0x01) Client MAC address: 00:50:56:a5:fd:dd - Option: (50) Requested IP Address (10.10.10.3) Length: 4 <Value: 0a0a0a03> Requested IP Address: 10.10.10.3 - Option: (54) DHCP Server Identifier (10.10.10.150) Length: 4 <Value: 0a0a0a96> DHCP Server Identifier: 10.10.10.150 Option: (12) Host Name Length: 10 <Value: 43584c6162732d573130> Host Name: CXLabs-W10 Option: (81) Client Fully Qualified Domain Name Length: 13 <Value: 00000043584c6162732d573130> > Flags: 0x00 A-RR result: 0 PTR-RR result: 0 Client name: CXLabs-W10 Option: (60) Vendor class identifier Length: 8 <Value: 4d53465420352e30> Vendor class identifier: MSFT 5.0 Option: (55) Parameter Request List Length: 14 <Value: 0103060f1f212b2c2e2f7779f9fc> Parameter Request List Item: (1) Subnet Mask Parameter Request List Item: (3) Router Parameter Request List Item: (6) Domain Name Server Parameter Request List Item: (15) Domain Name Parameter Request List Item: (31) Perform Router Discover Parameter Request List Item: (33) Static Route Parameter Request List Item: (43) Vendor-Specific Information Parameter Request List Item: (44) NetBIOS over TCP/IP Name Server Parameter Request List Item: (46) NetBIOS over TCP/IP Node Type Parameter Request List Item: (47) NetBIOS over TCP/IP Scope Parameter Request List Item: (119) Domain Search Parameter Request List Item: (121) Classless Static Route Parameter Request List Item: (249) Private/Classless Static Route (Microsoft) Parameter Request List Item: (252) Private/Proxy autodiscovery Option: (82) Agent Information Option Length: 47 <Value: 010e0108000600018a9200a000000000206707db9b84daf97090074656e616e742d610b040a0a0a0105040a0a0a00> Option 82 Suboption: (1) Agent Circuit ID Length: 14 <Value: 0108000600018a9200a00000000> Agent Circuit ID: 0108000600018a9200a00000000 Option 82 Suboption: (2) Agent Remote ID Length: 6 <Value: 707db9b84daf> Agent Remote ID: 707db9b84daf Option 82 Suboption: (151) VRF name/VPN ID Length: 9 <Value: 0074656e616e742d61> VRF name: Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 <Value: 0a0a0a01> Server ID Override: 10.10.10.1 Option 82 Suboption: (5) Link selection (10.10.10.0) Length: 4 <Value: 0a0a0a00> Link selection: 10.10.10.0 Option: (255) End Option End: 255
Invio ACK dal server DHCP

```
Ethernet II, Src: 00:50:56:a5:dc:ca, Dst: 00:00:0a:0a:0a:0a
Internet Protocol Version 4, Src: 10.10.10.150, Dst: 172.16.10.8
User Datagram Protocol, Src Port: 67, Dst Port: 67
Dynamic Host Configuration Protocol (ACK)
  Message type: Boot Reply (2)
  Hardware type: Ethernet (0x01)
  Hardware address length: 6
  Hops: 0
  Transaction ID: 0xe9e35087
  Seconds elapsed: 0

    Bootp flags: 0x8000, Broadcast flag (Broadcast)

    1... .... = Broadcast flag: Broadcast
    .000 0000 0000 0000 = Reserved flags: 0x0000
  Client IP address: 0.0.0.0
  Your (client) IP address: 10.10.10.3
  Next server IP address: 0.0.0.0
  Relay agent IP address: 172.16.10.8
  Client MAC address: 00:50:56:a5:fd:dd
  Client hardware address padding: 00000000000000000000
  Server host name not given
  Boot file name not given
  Magic cookie: DHCP
  Option: (53) DHCP Message Type (ACK)
    Length: 1
    <Value: 05>
    DHCP: ACK (5)

    Option: (58) Renewal Time Value

    Length: 4
    <Value: 0000a8c0>
    Renewal Time Value: 12 hours (43200)

    Option: (59) Rebinding Time Value

    Length: 4
    <Value: 00012750>
    Rebinding Time Value: 21 hours (75600)
· Option: (51) IP Address Lease Time
    Length: 4
    <Value: 00015180>
    IP Address Lease Time: 1 day (86400)

    Option: (54) DHCP Server Identifier (10.10.10.1)

    Length: 4
    <Value: 0a0a0a01>
    DHCP Server Identifier: 10.10.10.1

    Option: (1) Subnet Mask (255.255.255.0)

    Length: 4
    <Value: ffffff00>
    Subnet Mask: 255.255.255.0
  Option: (81) Client Fully Qualified Domain Name
    Length: 3
    <Value: 00ffff>
    Flags: 0x00
    A-RR result: 255
    PTR-RR result: 255

    Option: (3) Router

    Length: 4
    <Value: 0a0a0a01>
    Router: 10.10.10.1

    Option: (15) Domain Name

    Length: 10
    <Value: 636973636f2e636f6d00>
    Domain Name: cisco.com

    Option: (82) Agent Information Option

    Length: 47
    <Value: 010e0108000600018a9200a00000000000206707db9b84daf97090074656e616e742d610b040a0a0a0105040a0a0a00>

    Option 82 Suboption: (1) Agent Circuit ID

      Length: 14
       <Value: 0108000600018a9200a00000000>
      Agent Circuit ID: 0108000600018a9200a00000000

    Option 82 Suboption: (2) Agent Remote ID

      Length: 6
       <Value: 707db9b84daf>
      Agent Remote ID: 707db9b84daf

    Option 82 Suboption: (151) VRF name/VPN ID

      Length: 9
       <Value: 0074656e616e742d61>
     VRF name:
        [Expert Info (Warning/Undecoded): Trailing stray characters]
           [Trailing stray characters]
<Message: Trailing stray characters>
           [Severity level: Warning]
           [Group: Undecoded]

    Option 82 Suboption: (11) Server ID Override (10.10.10.1)

      Length: 4
       <Value: 0a0a0a01>
      Server ID Override: 10.10.10.1
   Option 82 Suboption: (5) Link selection (10.10.10.0)
      Length: 4
       <Value: 0a0a0a00>
      Link selection: 10.10.10.0
  Option: (255) End
    Option End: 255
```

ACK su LEAF-2-vPC

ACK ricevuti su LEAF-2-vPC	ACK inviati da LEAF-2-vPC
<pre>Character II. Soci MiddleSide(Second) State MiddleSide(Second) Der Disperse Protocol, social A. Social P. Socia</pre>	Element II, Src: 40:20:au305:50:07, But: 10:03:00:04:05:07 Thermet Protocol Version 4, Src 13:13:13:23, Dt Port: 779 (Figs. 10:00:00:05:07 Port: 05:07:779:05:01:05:05 (Figs. 10:00:05:07 Port: 05:07:779:05:01:05:05 (Figs. 10:00:05:07:05:07:779:05:01:05:05 (Figs. 10:00:05:07:05:07:779:05:01:05:05 (Figs. 10:00:05:07:05:07:779:05:01:05:05 (Figs. 10:00:05:07:05:07:779:05:01:05:05 (Figs. 10:00:05:07:05:07:779:05:01:05:05 (Figs. 10:00:05:07:05:07:779:05:01:05:05 (Figs. 10:00:05:07:05:07:779:05:01:05:05 (Figs. 10:00:05:07:05:07:779:05:01:05:05 (Figs. 10:00:05:07:05:07:07:05:05 (Figs. 10:00:05:07:05:07:07:05:07:07:05:07:07:05:07:07:05:07:07:05 (Figs. 10:00:05:07:05:07:07:05:07:07:07:07:07:07:07:07:07:07:07:07:07:

ACK sul DORSO

ACK ricevuti su SPINE	ACK inviati da SPINE
Ethernet II, Src: 60:26:aa:85:95:87, Dst: 10:b3:d6:a4:85:97	Ethernet II, Src: 18:b3:d6:a4:85:97, Dst: 70:70:b9:b8:4d:af Internet Protocol Version 4, Src: 13 13 12 254, Dst: 5 5 5 5
> User Datagram Protocol, Src Port: 65518, Dst Port: 4789	Duser Datagram Protocol, Src Port: 65518, Dst Port: 4789
Virtual extensible Local Area Network Flags: 0x0800, VXLAN Network ID (VNI)	Virtual eXtensible Local Area Network > Flags: 0x0800, VXLAN Network ID (VNI)
Group Policy ID: 0	Group Policy ID: 0
Reserved: 0	VXLAN Network Identifier (VNL): 303030 Reserved: 0
Ethernet II, Src: 02:00:0d:0d:0d:fe, Dst: 70:7d:b9:b8:4d:af Internet Protocol Version 4, Src: 10.10.150, Dst: 172.16.10.8	Ethernet II, Src: 02:00:0d:0d:fe, Dst: 70:7d:b9:b8:4d:af
User Datagram Protocol, Src Port: 67, Dst Port: 67	 User Datagram Protocol, Src Port: 67, Dst Port: 67
 Dynamic Host Configuration Protocol (ACK) Message type: Boot Reply (2) 	 Dynamic Host Configuration Protocol (ACK) Messane type: Root Renly (2)
Hardware type: Ethernet (0x01)	Hardware type: Ethernet (0x01)
Hops: 0	Hardware address length: 6 Hops: 0
Transaction ID: 0xe9e35087 Seconds elaneed: 0	Transaction ID: 0xe9e35087
 Bootp flags: 0x8000, Broadcast flag (Broadcast) 	 Bootp flags: 0x8000, Broadcast flag (Broadcast)
1 = Broadcast flag: Broadcast .000 0000 0000 = Reserved flags: 0x0000	1 = Broadcast flag: Broadcast
Client IP address: 0.0.0.0	Client IP address: 0.0.0.0
Next server IP address: 0.0.0.0	Your (client) IP address: 10.10.10.3 Next server IP address: 0.0.0.0
Relay agent IP address: 172.16.10.8	Relay agent IP address: 172.16.10.8
Client hardware address padding: 0000000000000000000	Client hardware address padding: 0000000000000000000
Server host name not given Boot file name not given	Server host name not given Boot file name not given
Magic cookie: DHCP	Magic cookie: DHCP
<pre>v Option: (53) DHCP Message Type (ACK) Length: 1</pre>	 Option: (53) DHCP Message Type (ACK) Length: 1
<value: 05=""></value:>	<value: 05=""></value:>
• Option: (58) Renewal Time Value	<pre>> Option: (58) Renewal Time Value</pre>
Length: 4	Length: 4
Renewal Time Value: 12 hours (43200)	Renewal Time Value: 12 hours (43200)
Option: (59) Rebinding Time Value Length: 4	 Option: (59) Rebinding Time Value Length: 4
<value: 00012750=""></value:>	<value: 00012750=""></value:>
<pre>volume volume volu</pre>	<pre>value: 21 hours (75000) v Option: (51) IP Address Lease Time</pre>
Length: 4	Length: 4
IP Address Lease Time: 1 day (86400)	IP Address Lease Time: 1 day (86400)
 Option: (54) DHCP Server Identifier (10.10.10.1) Length: 4 	 Option: (54) DHCP Server Identifier (10.10.10.1) Length: 4
<value: 0a0a0a01=""></value:>	<value: 0a0a0a01=""></value:>
DHCP Server Identifier: 10.10.10.1 • Option: (1) Subnet Mask (255.255.2)	DHCP Server Identifier: 10.10.10.1 ~ Option: (1) Subnet Mask (255.255.2)
Length: 4	Length: 4
Subnet Mask: 255.255.0	Subnet Mask: 255.255.255.0
 Option: (81) Client Fully Qualified Domain Name Length: 3 	 Option: (81) Client Fully Qualified Domain Name Length: 3
<value: 00ffff=""></value:>	<value: 00ffff=""></value:>
Flags: 0x00 0000 = Reserved flags: 0x0	○ Flags: 0x00 0000 = Reserved flags: 0x0
0 = Server DDNS: Some server updates	0 = Server DDNS: Some server updates
A-RE result: 255	A-RR result: 255
PTR-RR result: 255	PTR-RR result: 255
<pre>> Option: (3) Router Length: 4</pre>	Option: (3) Router Length: 4
<value: 0a0a0a01=""></value:>	<value: 0a0a0a01=""></value:>
Router: 10.10.10.1 • Option: (15) Domain Name	v Option: (15) Domain Name
Length: 10	Length: 10
Cvalue: 6369/3636720367608000 Domain Name: cisco.com	Domain Name: cisco.com
Option: (82) Agent Information Option Length: 47	Option: (82) Agent Information Option Length: 47
<value: 010e0108000600018a9200a00000000000206707db9b84daf97090074656e616e742d610b040a0a0a0105040a0a0a00=""></value:>	<value: 010e0108000600018a9200a00000000206707db9b84daf97090074655e616e742d610b040a0a0a0105040a0a0a00=""></value:>
Option 82 Suboption: (1) Agent Circuit ID Length: 14	Length: 14
<value: 0108000600018a9200a00000000=""></value:>	<value: 0108000600018a9200a000000000=""> Agent Circuit ID: 0108000600018a9200a0000000</value:>
 Option 82 Suboption: (2) Agent Remote ID 	 Option 82 Suboption: (2) Agent Remote ID
Length: 6	<pre></pre>
Agent Remote ID: 707db9b84daf	Agent Remote ID: 707db9b84daf
Option 82 Suboption: (151) VRF name/VPN ID Length: 9	Length: 9
<value: 0074656e616e742d61=""></value:>	<value: 0074656e616e742d61=""></value:>
<pre>vir name: v [Expert Info (Warning/Undecoded): Trailing stray characters]</pre>	[Expert Info (Warning/Undecoded): Trailing stray characters]
[Trailing stray characters]	[Trailing stray characters] <message: characters="" stray="" trailing=""></message:>
[Severity level: Warning]	[Severity level: Warning]
[Group: Undecoded] ~ Option 82 Suboption: (11) Server ID Override (10.10.10.1)	 Option 82 Suboption: (11) Server ID Override (10.10.10.1)
Length: 4	Length: 4 <value: 8a8a8a81=""></value:>
<value: 0a0a0a01=""> Server ID Override: 10.10.10.1</value:>	Server ID Override: 10.10.10.1
• Option 82 Suboption: (5) Link selection (10.10.00)	 Option 82 Suboption: (5) Link selection (10.10.0) Length: 4
<value: 0a0a0a00=""></value:>	<value: 0a0a0a00=""></value:>
Link selection: 10.10.10.0	- Option: (255) End
Option End: 255	Option End: 255

ACK su FOGLIA-1

ACK ricevuti su FOGLIA-1	ACK inviati da FOGLIA-1

	> Ethernet II, Src: 70:7d:b9:b8:4d:at, Dst: ff:ff:ff:ff:ff:ff
Ethernet II, Src: 10:b3:d6:a4:85:97, Dst: 70:7d:b9:b8:4d:af	Internet Protocol Version 4, Src: 10.10.10.1, Dst: 255.255.255.255
Internet Protocol Version 4, Src: 13.13.13.254, Dst: 5.5.5.5	> User Datagram Protocol, Src Port: 67, Dst Port: 68
Virtual extensible Local Area Network	✓ Dynamic Host Configuration Protocol (ACK)
> Flags: 0x0800, VXLAN Network ID (VNI)	Message type: Boot Reply (2)
Group Policy ID: 0	Hardware type: Ethernet (0x01)
Reserved: 0	Hardware offerer longth 6
Ethernet II, Src: 02:00:0d:0d:0d:fe, Dst: 70:7d:b9:b8:4d:af	hardware address tength: 6
Internet Protocol Version 4, Src: 10.10.100.150, Dst: 172.16.10.8 User Datagram Protocol Scr. Part: 67, Dst Par	Hops: 0
Dynamic Host Configuration Protocol (ACK)	Transaction ID: 0xe9e35087
Message type: Boot Reply (2)	Seconds elapsed: 0
Hardware type: Ethernet (0x01) Hardware address length: 6	Sooto flags: 0x8000, Broadcast flag (Broadcast)
Hops: 0	= Producest flag. Producest
Transaction ID: 0xe9e35087	in in in in a broadcast flag. Broadcast
Seconds elapsed: 0 - Rooto flans: 0x8000. Recoderast flan (Recoderast)	.000 0000 0000 0000 = Reserved flags: 0x0000
1 Broadcast flag: Broadcast	Client IP address: 0.0.0.0
.000 0000 0000 0000 = Reserved flags: 0x0000	Your (client) IP address: 10.10.10.3
Your (client) IP address: 0.0.00	Next server IP address: 0.0.0.0
Next server IP address: 0.0.0.0	Pelay agent TP address: 10 10 10 1
Relay agent IP address: 172.16.10.8	Client MC address, 10.10.10.1
Client hardware address padina: 0000000000000000	Ctient MAC address: 00:50:56:a5:Td:dd
Server host name not given	Client hardware address padding: 0000000000000000000
Boot file name not given	Server host name not given
· Option: (S3) DHCP Message Type (ACK)	Boot file name not given
Length: 1	Magic cookie: DHCP
<value: 05=""></value:>	Aption (52) DHCD Massage Tupe (ACK)
 Option: (58) Renewal Time Value 	v opcioni, (55) once message type (ACK)
Length: 4	Length: 1
<value: 00000300=""> Receval Time Value: 12 hours (43200)</value:>	<value: 05=""></value:>
 Option: (59) Rebinding Time Value 	DHCP: ACK (5)
Length: 4	 Option: (58) Renewal Time Value
<value: 00012="" 30=""> Rebinding Time Value: 21 hours (75600)</value:>	length: A
 Option: (51) IP Address Lease Time 	
Length: 4	<value: 0000a8c0=""></value:>
<pre>value: 00015180> IP Address Lease Time: 1 day (86400)</pre>	Renewal Time Value: 12 hours (43200)
 Option: (54) DHCP Server Identifier (10.10.10.1) 	 Option: (59) Rebinding Time Value
Length: 4	Length: 4
DHCP Server Identifier: 10.10.10.1	<value: 00012750=""></value:>
 Option: (1) Subnet Mask (255.255.0) 	Rehinding Time Value: 21 hours (75600)
<pre>Length: 4 </pre>	Ortions (F1) TD Address Lesso Time
Subnet Mask: 255.255.25.0	V Uption: (51) IP Address Lease Time
 Option: (81) Client Fully Qualified Domain Name 	Length: 4
<value: 00ffff=""></value:>	<value: 00015180=""></value:>
Flags: 0x00	IP Address Lease Time: 1 day (86400)
0000 = Reserved Tlags: 0x0	 Option: (54) DHCP Server Identifier (10.10.10.1)
0 = Encoding: ASCII encoding	length: 4
0. = Server overrides: No override	
A-RR result: 255	
PTR-RR result: 255	DHCP Server Identifier: 10.10.10.1
<pre>> Option: (3) Router leadth 4</pre>	Option: (1) Subnet Mask (255.255.255.0)
(value: 0a0a0a01>	Length: 4
Router: 10.10.10.1	<value: ffffff00=""></value:>
<pre>v uption: (i) vomain Name Leouth: 10</pre>	Subnet Mack: 255 255 255 0
<value: 63697363612e63616d00=""></value:>	Detion: (21) Clicost Sully Qualified Densis Name
Domain Name: cisco.com	option: (81) client rully qualified bomain Name
Length: 47	Length: 3
<value: 010e0108000600018a9200a000000000206707db9b84da197090074656e616e742d610b040a0a0a0105040a0a0a00=""></value:>	<value: 00ffff=""></value:>
 Uption 82 Suboption: (1) Agent Circuit 10 Lenath: 14 	Flags: 0x00
<value: 0108000600018a9200a00000000=""></value:>	0000 = Reserved flags: 0x0
Agent Circuit ID: 0108000600018392003000000	A = Server DDNS: Some server undates
Length: 6	- Server build. State server updates
<value: 707db9b84daf=""></value:>	W = Encoding: ASCII encoding
Agent Remote ID: 787d99884daf	0. = Server overrides: No override
Length: 9	0 = Server: Client
<value: 0074656e616e742d61=""></value:>	A-RR result: 255
<pre>viv nume. v [Expert Info (Warning/Undecoded): Trailing stray characters]</pre>	PTR-RR result: 255
[Trailing stray characters]	<pre>v Option: (3) Router</pre>
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	Length: A
[Group: Undecoded]	
 Option 82 Suboption: (11) Server ID Override (10.10.10.1) Length: 4 	
	Router: 10.10.10.1
Server ID Override: 10.10.10.1	 Option: (15) Domain Name
 Option 82 Suboption: (5) Link selection (10.10.10.0) Length: 4 	Length: 10
<value: 0a0a0a00=""></value:>	<value: 636973636f2e636f6d00=""></value:>
Link selection: 10.10.10.0	Domain Name: cisco.com
Option End: 255	Ontion: (255) End
	Option End, 255
	uption End: 255

ACK su HOST-1

Ethernet II, Src: 70:7d:b9:b8:4d:af, Dst: ff:ff:ff:ff:ff:ff Internet Protocol Version 4, Src: 10.10.10.1, Dst: 255.255.255.255 > User Datagram Protocol, Src Port: 67, Dst Port: 68 Dynamic Host Configuration Protocol (ACK) Message type: Boot Reply (2) Hardware type: Ethernet (0x01) Hardware address length: 6 Hops: 0 Transaction ID: 0xe9e35087 Seconds elapsed: 0 Bootp flags: 0x8000, Broadcast flag (Broadcast) 1... = Broadcast flag: Broadcast .000 0000 0000 0000 = Reserved flags: 0x0000 Client IP address: 0.0.0.0 Your (client) IP address: 10.10.10.3 Next server IP address: 0.0.0.0 Relay agent IP address: 10.10.10.1 Client MAC address: 00:50:56:a5:fd:dd Client hardware address padding: 0000000000000000000 Server host name not given Boot file name not given Magic cookie: DHCP Option: (53) DHCP Message Type (ACK) Length: 1 <Value: 05> DHCP: ACK (5) Option: (58) Renewal Time Value Length: 4 <Value: 0000a8c0> Renewal Time Value: 12 hours (43200) Option: (59) Rebinding Time Value Length: 4 <Value: 00012750> Rebinding Time Value: 21 hours (75600) Option: (51) IP Address Lease Time Length: 4 <Value: 00015180> IP Address Lease Time: 1 day (86400) Option: (54) DHCP Server Identifier (10.10.10.1) Length: 4 <Value: 0a0a0a01> DHCP Server Identifier: 10.10.10.1 Option: (1) Subnet Mask (255.255.255.0) Length: 4 <Value: ffffff00> Subnet Mask: 255.255.255.0 Option: (81) Client Fully Qualified Domain Name Length: 3 <Value: 00ffff> Flags: 0x00 0000 = Reserved flags: 0x0 0... = Server DDNS: Some server updates0.. = Encoding: ASCII encoding0. = Server overrides: No override0 = Server: Client A-RR result: 255 PTR-RR result: 255 Option: (3) Router Length: 4 <Value: 0a0a0a01> Router: 10.10.10.1 Option: (15) Domain Name Length: 10 <Value: 636973636f2e636f6d00> Domain Name: cisco.com Option: (255) End Option End: 255

Informazioni correlate

Configurazione di VXLAN BGP VPN

Configurazione di VXLAN

Risoluzione dei problemi relativi a DHCP su Nexus 9000

Guida alla configurazione di Cisco Nexus serie 9000 NX-OS VXLAN, versione 10.4(x)

Informazioni su questa traduzione

Cisco ha tradotto questo documento utilizzando una combinazione di tecnologie automatiche e umane per offrire ai nostri utenti in tutto il mondo contenuti di supporto nella propria lingua. Si noti che anche la migliore traduzione automatica non sarà mai accurata come quella fornita da un traduttore professionista. Cisco Systems, Inc. non si assume alcuna responsabilità per l'accuratezza di queste traduzioni e consiglia di consultare sempre il documento originale in inglese (disponibile al link fornito).