**No. Time Source Destination Protocol Length**

**1 0.000000 216.47.152.157 216.47.152.255 NBNS 92**

**Info**

**Name query NB WORKGROUP<1b>**

Frame 1: 92 bytes on wire (736 bits), 92 bytes captured (736 bits)

Encapsulation type: Ethernet (1)

Arrival Time: Aug 25, 2005 12:13:15.311787000 Central Daylight Time

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1124989995.311787000 seconds

[Time delta from previous captured frame: 0.000000000 seconds]

[Time delta from previous displayed frame: 0.000000000 seconds]

[Time since reference or first frame: 0.000000000 seconds]

Frame Number: 1

Frame Length: 92 bytes (736 bits)

Capture Length: 92 bytes (736 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:ethertype:ip:udp:nbns]

[Coloring Rule Name: SMB]

[Coloring Rule String: smb || nbss || nbns || nbipx || ipxsap || netbios]

Ethernet II, Src: Dell\_b7:8f:d1 (00:0d:56:b7:8f:d1), Dst: Broadcast (ff:ff:ff:ff:ff:ff)

Destination: Broadcast (ff:ff:ff:ff:ff:ff)

Address: Broadcast (ff:ff:ff:ff:ff:ff)

.... ..1. .... .... .... .... = LG bit: Locally administered address (this is NOT the factory default)

.... ...1 .... .... .... .... = IG bit: Group address (multicast/broadcast)

Source: Dell\_b7:8f:d1 (00:0d:56:b7:8f:d1)

Address: Dell\_b7:8f:d1 (00:0d:56:b7:8f:d1)

.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)

.... ...0 .... .... .... .... = IG bit: Individual address (unicast)

Type: IP (0x0800)

Internet Protocol Version 4, Src: 216.47.152.157 (216.47.152.157), Dst: 216.47.152.255 (216.47.152.255)

Version: 4

Header Length: 20 bytes

Differentiated Services Field: 0x00 (DSCP 0x00: Default; ECN: 0x00: Not-ECT (Not ECN-Capable Transport))

0000 00.. = Differentiated Services Codepoint: Default (0x00)

.... ..00 = Explicit Congestion Notification: Not-ECT (Not ECN-Capable Transport) (0x00)

Total Length: 78

Identification: 0x137e (4990)

Flags: 0x00

0... .... = Reserved bit: Not set

.0.. .... = Don't fragment: Not set

..0. .... = More fragments: Not set

Fragment offset: 0

Time to live: 128

Protocol: UDP (17)

Header checksum: 0x4525 [validation disabled]

[Good: False]

[Bad: False]

Source: 216.47.152.157 (216.47.152.157)

Destination: 216.47.152.255 (216.47.152.255)

[Source GeoIP: Unknown]

[Destination GeoIP: Unknown]

User Datagram Protocol, Src Port: 137 (137), Dst Port: 137 (137)

Source Port: 137 (137)

Destination Port: 137 (137)

Length: 58

Checksum: 0x1b50 [validation disabled]

[Good Checksum: False]

[Bad Checksum: False]

[Stream index: 0]

NetBIOS Name Service

Transaction ID: 0x809f

Flags: 0x0110 (Name query)

0... .... .... .... = Response: Message is a query

.000 0... .... .... = Opcode: Name query (0)

.... ..0. .... .... = Truncated: Message is not truncated

.... ...1 .... .... = Recursion desired: Do query recursively

.... .... ...1 .... = Broadcast: Broadcast packet

Questions: 1

Answer RRs: 0

Authority RRs: 0

Additional RRs: 0

Queries

WORKGROUP<1b>: type NB, class IN

Name: WORKGROUP<1b> (Domain Master Browser)

Type: NB

Class: IN

0000 ff ff ff ff ff ff 00 0d 56 b7 8f d1 08 00 45 00 ........V.....E.

0010 00 4e 13 7e 00 00 80 11 45 25 d8 2f 98 9d d8 2f .N.~....E%./.../

0020 98 ff 00 89 00 89 00 3a 1b 50 80 9f 01 10 00 01 .......:.P......

0030 00 00 00 00 00 00 20 46 48 45 50 46 43 45 4c 45 ...... FHEPFCELE

0040 48 46 43 45 50 46 46 46 41 43 41 43 41 43 41 43 HFCEPFFFACACACAC

0050 41 43 41 43 41 42 4c 00 00 20 00 01 ACACABL.. ..

**No. Time Source Destination Protocol Length**

**2 2.934823 Hewlett-\_99:d7:36 Broadcast ARP 42**

**Info**

**Who has 216.47.142.2? Tell 216.47.142.109**

Frame 2: 42 bytes on wire (336 bits), 42 bytes captured (336 bits)

Encapsulation type: Ethernet (1)

Arrival Time: Aug 25, 2005 12:13:18.246610000 Central Daylight Time

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1124989998.246610000 seconds

[Time delta from previous captured frame: 2.934823000 seconds]

[Time delta from previous displayed frame: 2.934823000 seconds]

[Time since reference or first frame: 2.934823000 seconds]

Frame Number: 2

Frame Length: 42 bytes (336 bits)

Capture Length: 42 bytes (336 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:ethertype:arp]

[Coloring Rule Name: ARP]

[Coloring Rule String: arp]

Ethernet II, Src: Hewlett-\_99:d7:36 (00:02:a5:99:d7:36), Dst: Broadcast (ff:ff:ff:ff:ff:ff)

Destination: Broadcast (ff:ff:ff:ff:ff:ff)

Address: Broadcast (ff:ff:ff:ff:ff:ff)

.... ..1. .... .... .... .... = LG bit: Locally administered address (this is NOT the factory default)

.... ...1 .... .... .... .... = IG bit: Group address (multicast/broadcast)

Source: Hewlett-\_99:d7:36 (00:02:a5:99:d7:36)

Address: Hewlett-\_99:d7:36 (00:02:a5:99:d7:36)

.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)

.... ...0 .... .... .... .... = IG bit: Individual address (unicast)

Type: ARP (0x0806)

Address Resolution Protocol (request)

Hardware type: Ethernet (1)

Protocol type: IP (0x0800)

Hardware size: 6

Protocol size: 4

Opcode: request (1)

Sender MAC address: Hewlett-\_99:d7:36 (00:02:a5:99:d7:36)

Sender IP address: 216.47.142.109 (216.47.142.109)

Target MAC address: 00:00:00\_00:00:00 (00:00:00:00:00:00)

Target IP address: 216.47.142.2 (216.47.142.2)

0000 ff ff ff ff ff ff 00 02 a5 99 d7 36 08 06 00 01 ...........6....

0010 08 00 06 04 00 01 00 02 a5 99 d7 36 d8 2f 8e 6d ...........6./.m

0020 00 00 00 00 00 00 d8 2f 8e 02 ......./..

**No. Time Source Destination Protocol Length**

**3 2.935330 All-HSRP-routers\_8e Hewlett-\_99:d7:36 ARP 60**

**Info**

**216.47.142.2 is at 00:00:0c:07:ac:8e**

Frame 3: 60 bytes on wire (480 bits), 60 bytes captured (480 bits)

Encapsulation type: Ethernet (1)

Arrival Time: Aug 25, 2005 12:13:18.247117000 Central Daylight Time

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1124989998.247117000 seconds

[Time delta from previous captured frame: 0.000507000 seconds]

[Time delta from previous displayed frame: 0.000507000 seconds]

[Time since reference or first frame: 2.935330000 seconds]

Frame Number: 3

Frame Length: 60 bytes (480 bits)

Capture Length: 60 bytes (480 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:ethertype:arp]

[Coloring Rule Name: ARP]

[Coloring Rule String: arp]

Ethernet II, Src: All-HSRP-routers\_8e (00:00:0c:07:ac:8e), Dst: Hewlett-\_99:d7:36 (00:02:a5:99:d7:36)

Destination: Hewlett-\_99:d7:36 (00:02:a5:99:d7:36)

Address: Hewlett-\_99:d7:36 (00:02:a5:99:d7:36)

.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)

.... ...0 .... .... .... .... = IG bit: Individual address (unicast)

Source: All-HSRP-routers\_8e (00:00:0c:07:ac:8e)

Address: All-HSRP-routers\_8e (00:00:0c:07:ac:8e)

.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)

.... ...0 .... .... .... .... = IG bit: Individual address (unicast)

Type: ARP (0x0806)

Padding: 000000000000000000000000000000000000

Address Resolution Protocol (reply)

Hardware type: Ethernet (1)

Protocol type: IP (0x0800)

Hardware size: 6

Protocol size: 4

Opcode: reply (2)

Sender MAC address: All-HSRP-routers\_8e (00:00:0c:07:ac:8e)

Sender IP address: 216.47.142.2 (216.47.142.2)

Target MAC address: Hewlett-\_99:d7:36 (00:02:a5:99:d7:36)

Target IP address: 216.47.142.109 (216.47.142.109)

0000 00 02 a5 99 d7 36 00 00 0c 07 ac 8e 08 06 00 01 .....6..........

0010 08 00 06 04 00 02 00 00 0c 07 ac 8e d8 2f 8e 02 ............./..

0020 00 02 a5 99 d7 36 d8 2f 8e 6d 00 00 00 00 00 00 .....6./.m......

0030 00 00 00 00 00 00 00 00 00 00 00 00 ............

**No. Time Source Destination Protocol Length**

**4 3.168451 Cisco\_8b:da:44 Spanning-tree-(for-bridges)\_00 STP 60**

**Info**

**Conf. Root = 4096/4095/00:d0:03:f8:c0:ce Cost = 6020 Port = 0x8004**

Frame 4: 60 bytes on wire (480 bits), 60 bytes captured (480 bits)

Encapsulation type: Ethernet (1)

Arrival Time: Aug 25, 2005 12:13:18.480238000 Central Daylight Time

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1124989998.480238000 seconds

[Time delta from previous captured frame: 0.233121000 seconds]

[Time delta from previous displayed frame: 0.233121000 seconds]

[Time since reference or first frame: 3.168451000 seconds]

Frame Number: 4

Frame Length: 60 bytes (480 bits)

Capture Length: 60 bytes (480 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:llc:stp]

[Coloring Rule Name: Broadcast]

[Coloring Rule String: eth[0] & 1]

IEEE 802.3 Ethernet

Destination: Spanning-tree-(for-bridges)\_00 (01:80:c2:00:00:00)

Address: Spanning-tree-(for-bridges)\_00 (01:80:c2:00:00:00)

.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)

.... ...1 .... .... .... .... = IG bit: Group address (multicast/broadcast)

Source: Cisco\_8b:da:44 (00:11:21:8b:da:44)

Address: Cisco\_8b:da:44 (00:11:21:8b:da:44)

.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)

.... ...0 .... .... .... .... = IG bit: Individual address (unicast)

Length: 38

Padding: 0000000000000000

Logical-Link Control

DSAP: Spanning Tree BPDU (0x42)

0100 001. = SAP: Spanning Tree BPDU

.... ...0 = IG Bit: Individual

SSAP: Spanning Tree BPDU (0x42)

0100 001. = SAP: Spanning Tree BPDU

.... ...0 = CR Bit: Command

Control field: U, func=UI (0x03)

000. 00.. = Command: Unnumbered Information (0x00)

.... ..11 = Frame type: Unnumbered frame (0x03)

Spanning Tree Protocol

Protocol Identifier: Spanning Tree Protocol (0x0000)

Protocol Version Identifier: Spanning Tree (0)

BPDU Type: Configuration (0x00)

BPDU flags: 0x00

0... .... = Topology Change Acknowledgment: No

.... ...0 = Topology Change: No

Root Identifier: 4096 / 4095 / 00:d0:03:f8:c0:ce

Root Bridge Priority: 4096

Root Bridge System ID Extension: 4095

Root Bridge System ID: ComdaEnt\_f8:c0:ce (00:d0:03:f8:c0:ce)

Root Path Cost: 6020

Bridge Identifier: 32768 / 207 / 00:11:21:8b:da:40

Bridge Priority: 32768

Bridge System ID Extension: 207

Bridge System ID: Cisco\_8b:da:40 (00:11:21:8b:da:40)

Port identifier: 0x8004

Message Age: 3

Max Age: 20

Hello Time: 2

Forward Delay: 15

0000 01 80 c2 00 00 00 00 11 21 8b da 44 00 26 42 42 ........!..D.&BB

0010 03 00 00 00 00 00 1f ff 00 d0 03 f8 c0 ce 00 00 ................

0020 17 84 80 cf 00 11 21 8b da 40 80 04 03 00 14 00 ......!..@......

0030 02 00 0f 00 00 00 00 00 00 00 00 00 ............