DHCP Server Report

DEMO-DHCP-12R2

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Author	CENTREL Solutions
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Disclaimer

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DHCP Server Information

This is a sample DHCP server running Windows server 2012 R2. Although in this example the server is serving IPv4 addresses, documentation of IPv6 is supported.

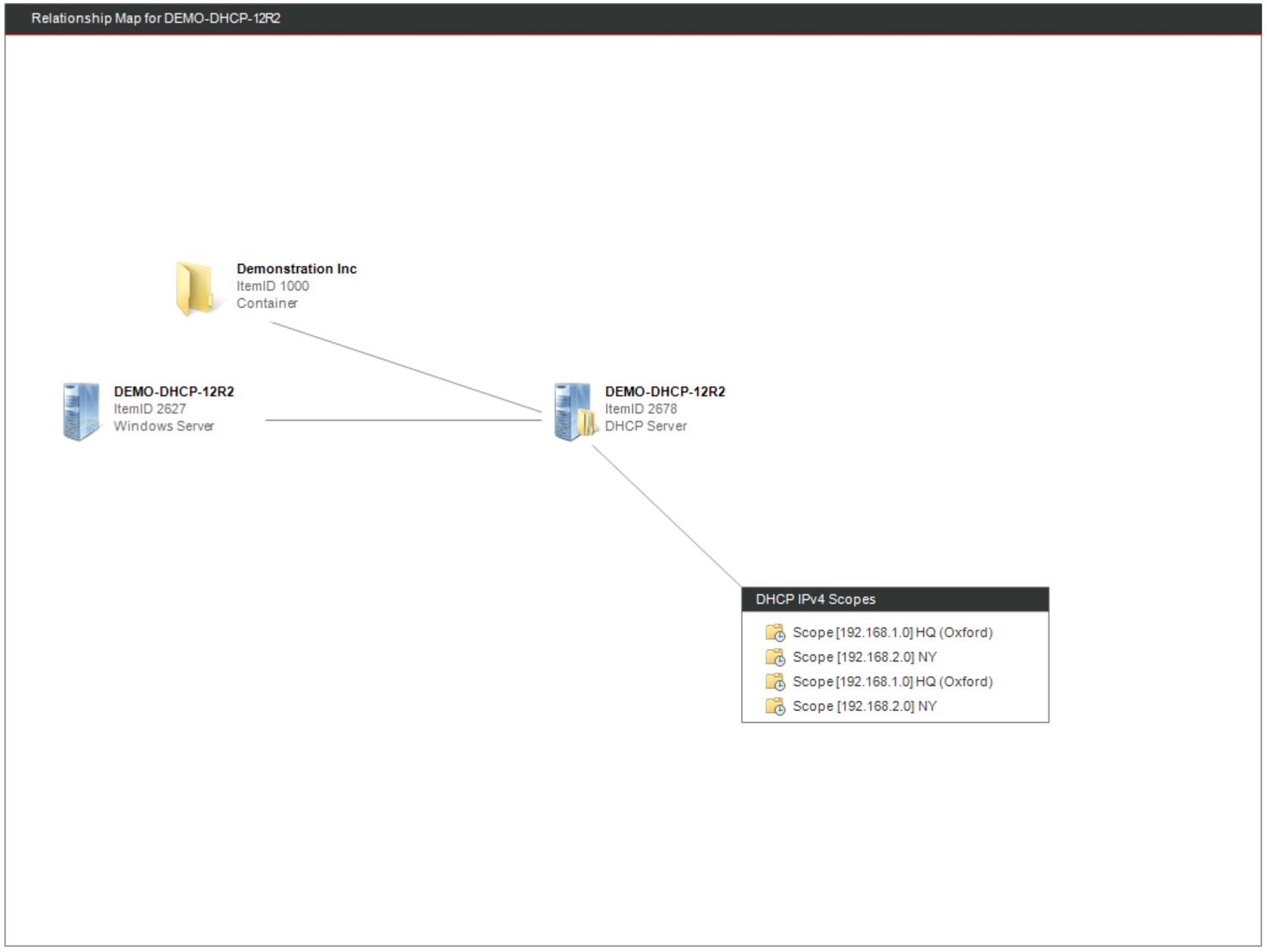
General Information

Description	Microsoft Windows Server 2012 R2 Datacenter
Item Name	DEMO-DHCP-12R2
Item ID	2678
Primary Owner Name	IT Services
Primary Owner Contact	itservices@demonstration.int
Scanned on Date	07 May 2014
Client Version	6.0.0

Relationships

Item ID	Name	Type	Relationship Type
2627	DEMO-DHCP-12R2	Windows Server	Is Hosted On
1000	Demonstration Inc	Container	Contained Within
Internal	Scope [192.168.1.0] HQ (Oxford)	DHCP IPv4 Scope	Hosts DHCP Scope
Internal	Scope [192.168.2.0] NY	DHCP IPv4 Scope	Hosts DHCP Scope
Internal	Scope [192.168.1.0] HQ (Oxford)	DHCP IPv4 Scope	Hosts DHCP Scope
Internal	Scope [192.168.2.0] NY	DHCP IPv4 Scope	Hosts DHCP Scope

Relationship Map



IPv4 Server

The Dynamic Host Configuration Protocol version 4 (DHCPv4) allows for the automatic configuration of client systems on an Internet Protocol version 4 (IPv4) network. Windows Server 2008 and above also provides the ability to provide IPv6 addresses through DHCP.

A Dynamic Host Configuration Protocol (DHCP) server provides the dynamic distribution of IP addressing and configuration information to clients. Normally the DHCP server provides the client with at least this basic information of IP Address, Subnet Mask and Default Gateway.

Other information can be provided including Domain Name Service (DNS) server addresses, DNS search suffixes and Windows Internet Name Service (WINS) server addresses.

General Information

Operating System	Microsoft Windows Server 2012 R2 Datacenter
Audit Enabled	True
Audit Log Directory	C:\Windows\system32\dhcp
Backup Path	C:\Windows\system32\dhcp\backup
IPv4 Bindings	
IPv6 Bindings	
Conflict Detection Attempts	0
Database Directory	C:\Windows\system32\dhcp
DDNS Credentials	
Is Domain Member	False
Is Rogue	False
Version	6.3
NAP Quarantine Enabled	False
NAP Unavailable Action	Full Access

DDNS Settings

Enabled	True
Update Mode	Dynamically update DNS A and PTR records only if requested by the DHCP clients
Update Legacy Clients	False
Enable Name Protection	False

User and Vendor Classes

With user classes, you can take advantage of predefined classes that can be used to support specialized groups of clients, such as BOOTP or Routing and Remote Access clients.

Vendor classes allow the expansion of possible DHCP options with vendor specific information.

Name	Description	Class Type
Default Routing and Remote Access Class	User class for remote access clients	User Class
Default Network Access Protection Class	Default special user class for Restricted Access clients	User Class
Default BOOTP Class	User class for BOOTP Clients	User Class
Microsoft Windows 2000 Options	Microsoft vendor-specific options for Windows 2000 and above Clients	Vendor Class
Microsoft Windows 98 Options	Microsoft vendor-specific options for Windows 98 Clients	Vendor Class
Microsoft Options	Microsoft vendor-specific options applicable to all Windows Clients	Vendor Class

Predefined Options

Predefined options allow the configuration of what DHCP options should be made available for configuration. Although options are defined at this level they are not assigned values or distributed to clients until they are assigned at the server, scope or reservation level.

Option	Description	Vendor Name	Value(s)
001 Microsoft Disable Netbios Option	Option for enabling or disabling Netbios for Microsoft Windows 2000 Clients	Microsoft Windows 2000 Options	0x1
002 Microsoft Release DHCP Lease On Shutdown Option	Option for enabling or disabling Windows 2000 Clients to release DHCP lease on shutdown	Microsoft Windows 2000 Options	0x1
003 Microsoft Default Router Metric Base	Default Router Base Metrics for Microsoft Windows 2000 Clients	Microsoft Windows 2000 Options	0x0
001 Microsoft Disable Netbios Option	Option for enabling or disabling Netbios for Microsoft Windows 2000 Clients	Microsoft Options	0x1
002 Microsoft Release DHCP Lease On Shutdown Option	Option for enabling or disabling Windows 2000 Clients to release DHCP lease on shutdown	Microsoft Options	0x1
003 Microsoft Default Router Metric Base	Default Router Base Metrics for Microsoft Windows 2000 Clients	Microsoft Options	0x1
121 Classless Static Routes	Destination, mask and router IP addresses in priority order	Standard	
001 Subnet Mask	Subnet mask in network byte order	Standard	0.0.0.0
002 Time Offset	UTC offset in seconds	Standard	0x0
003 Router	Array of router addresses ordered by preference	Standard	0.0.0.0
004 Time Server	Array of time server addresses, by preference	Standard	0.0.0.0
005 Name Servers	Array of name servers [IEN 116], by preference	Standard	0.0.0.0
006 DNS Servers	Array of DNS servers, by preference	Standard	0.0.0.0
007 Log Servers	Array of MIT_LCS UDP log servers on subnet	Standard	0.0.0.0
008 Cookie Servers	Array of cookie servers, RFC 865	Standard	0.0.0.0
009 LPR Servers	Array of RFC 1179 servers, by preference	Standard	0.0.0.0
010 Impress Servers	Array of Imagen Impress Servers	Standard	0.0.0.0
011 Resource Location Servers	Array of RFC 887 ResLoc Servers on subnet, by preference	Standard	0.0.0.0
012 Host Name	Host name for client, RFC 1035 character set	Standard	
013 Boot File Size	Size of boot image file in 512-octet blocks	Standard	0
014 Merit Dump File	Path name for crash dump file	Standard	
015 DNS Domain Name	DNS Domain name for client resolutions	Standard	
016 Swap Server	Address of client's swap server	Standard	0.0.0.0
017 Root Path	Path name for client's root disk, char set NVT ASCII	Standard	
018 Extensions Path	tftp file for option extensions	Standard	
019 IP Layer Forwarding	Disable/enable IP packet forwarding on this client	Standard	0x0
020 Nonlocal Source Routing	Disable/enable nonlocal datagrams	Standard	0x0
021 Policy Filter Masks	Destination/mask IP address pairs to filter source routes	Standard	0.0.0.0

022 Max DG Reassembly Size	Maximum size datagram for reassembly by client; max 576	Standard	0
023 Default IP Time-to-live	Default TTL for client's use on outgoing DGs	Standard	0x0
024 Path MTU Aging Timeout	Timeout in seconds for aging Path MTU values; RFC 1191	Standard	0x0
025 Path MTU Plateau Table	MTU discovery sizes, sorted by size, all >= 68	Standard	0
026 MTU Option	MTU discovery size, >= 68	Standard	0
027 All subnets are local	The client assumes that all subnets are local	Standard	0x0
028 Broadcast Address	Broadcast address	Standard	0.0.0.0
029 Perform Mask Discovery	The client should use ICMP for subnet mask discovery.	Standard	0x0
030 Mask Supplier Option	The client should respond to subnet mask requests via ICMP.	Standard	0x0
031 Perform Router Discovery	The client should solicit routers using RFC 1256.	Standard	0x0
032 Router Solicitation Address	Address to use for router solicitation	Standard	0.0.0.0
033 Static Route Option	Destination/router address pairs, in priority order	Standard	0.0.0.0
034 Trailer Encapsulation	The client should negotiate use of trailers (RFC 983).	Standard	0x0
035 ARP Cache Timeout	Timeout in seconds for ARP cache entries	Standard	0x0
036 Ethernet Encapsulation	0=>client should use ENet V2; 1=> IEEE 802.3	Standard	0x0
037 TCP Default Time-to-live	TTL that client uses when sending TCP segments	Standard	0x0
038 Keepalive Interval	Keepalive timeout in seconds	Standard	0x0
039 Keepalive Garbage	Send garbage octet	Standard	0x0
040 NIS Domain Name	Name of Network Information Service domain	Standard	
041 NIS Servers	Addresses of NIS servers on client's subnet	Standard	0.0.0.0
042 NTP Servers	Addresses of Network Time Protocol servers	Standard	0.0.0.0
043 Vendor Specific Info	Embedded vendor-specific options	Standard	
044 WINS/NBNS Servers	NBNS Address(es) in priority order	Standard	0.0.0.0
045 NetBIOS over TCP/IP NBDD	NetBIOS over TCP/IP NBDD address(es) in priority order	Standard	0.0.0.0
046 WINS/NBT Node Type	0x1 = B-node, 0x2 = P-node, 0x4 = M-node, 0x8 = H-node	Standard	0x0
047 NetBIOS Scope ID	NetBIOS over TCP/IP Scope ID	Standard	
048 X Window System Font	Array of X Windows font servers	Standard	0.0.0.0
049 X Window System Display	Array of X Windows Display Mgr servers	Standard	0.0.0.0
051 Lease	Client IP address lease time in seconds	Standard	0x0
058 Renewal (T1) Time Value	Time between addr assignment to RENEWING state	Standard	0x0
059 Rebinding (T2) Time Value	Time from addr assignment to REBINDING state	Standard	0x0

064 NIS+ Domain Name	The name of the client's NIS+ domain.	Standard	
065 NIS+ Servers	A list of IP addresses indicating NIS+ servers	Standard	0.0.0.0
066 Boot Server Host Name	TFTP boot server host name	Standard	
067 Bootfile Name	Bootfile Name	Standard	
068 Mobile IP Home Agents	Mobile IP home agents in priority order	Standard	0.0.0.0
069 Simple Mail Transport Protocol (SMTP) Servers	List of SMTP servers available to the client	Standard	0.0.0.0
070 Post Office Protocol (POP3) Servers	List of POP3 servers available to the client	Standard	0.0.0.0
071 Network News Transport Protocol (NNTP) Servers	List of NNTP servers available to the client	Standard	0.0.0.0
072 World Wide Web (WWW) Servers	List of WWW servers available to the client	Standard	0.0.0.0
073 Finger Servers	List of Finger servers available to the client	Standard	0.0.0.0
074 Internet Relay Chat (IRC) Servers	List of IRC servers available to the client	Standard	0.0.0.0
075 StreetTalk Servers	List of StreetTalk servers available to the client	Standard	0.0.0.0
076 StreetTalk Directory Assistance (STDA) Servers	List of STDA servers available to the client	Standard	0.0.0.0

Server Options

DHCP server options are options configured at the server level and are automatically inherited by scopes and reservations. When these options are specifically configured at the scope or reservation level they override the setting configured at the server level.

Option	Configuration Source	Name	Vendor Name	Value(s)
Option 43221	Scope	None	Standard	HQNAPScope
003 Router	Scope	None	Standard	192.168.2.254
015 DNS Domain Name	Scope	None	Standard	demonstration.int
006 DNS Servers	Scope	None	Standard	192.168.89.2
044 WINS/NBNS Servers	Scope	None	Standard	192.168.89.2
046 WINS/NBT Node Type	Scope	None	Standard	0x8

IPv4 Scopes

A DHCP scope is the consecutive range of IP addresses that the DHCP server can provide (lease) to clients on a subnet.
Scopes typically define a single physical subnet on your network to which DHCP services are offered.

Name	Description	Start Address	End Address
HQ (Oxford)	Headquarters scope	192.168.1.1	192.168.1.200
NY	New York office	192.168.2.1	192.168.2.200

Scope [192.168.1.0] HQ (Oxford)

Headquarters scope

Scope Information

Name	HQ (Oxford)
Description	Headquarters scope
Start Address	192.168.1.1
End Address	192.168.1.200
Subnet Mask	255.255.255.0
State	Enabled
DHCP Lease Duration	8 days, 0 hours, 0 minutes
BOOTP Lease Duration	Unlimited

DDNS Settings

Enabled	True
Update Mode	Dynamically update DNS A and PTR records only if requested by the DHCP clients
Update Legacy Clients	False
Enable Name Protection	False

Address Pool

An address pool defines the range of IP addresses that are available for assignment to clients by the DHCP server. Exclusions are a limited range or ranges of addresses can be defined within scope to instruct the DHCP server which addresses should not be allocated from the pool. This is typically used when a certain range of addresses within the pool are already statically assigned to network devices.

Start Address	End Address	Description
192.168.1.1	192.168.1.200	Address range for distribution
192.168.1.10	192.168.1.100	IP addresses excluded from distribution

Scope Options

DHCP scope options are options configured at the scope level and are automatically inherited by reservations. When these options are specifically configured at the reservation level they override the setting configured at the scope and server level. Options configured here override options configured at the server level.

Option	Configuration Source	Name	Vendor Name	Value(s)
003 Router	Scope	None	Standard	192.168.1.254
015 DNS Domain Name	Scope	None	Standard	demonstration.int
006 DNS Servers	Scope	None	Standard	192.168.89.2
044 WINS/NBNS Servers	Scope	None	Standard	192.168.89.2
046 WINS/NBT Node Type	Scope	None	Standard	0x8
Option 43221	Scope	None	Standard	HQNAPScope

Reservations

Reservations provide a permanent address lease assignment by the DHCP server. Reservations ensure that a specified hardware device on the subnet can always use the same IP address.

Name	Description	MAC Address
[192.168.1.10] DEMO-PRN01	Corporate printer	00:0C:29:88:72:AA
[192.168.1.11] DEMO-PRN02	HP LaserJet Printer	00:0C:29:88:72:AB
[192.168.1.12] DEMO-WS01	Management workstation	00:0C:29:88:72:AC

Reservation [192.168.1.10] DEMO-PRN01

Reservation Information

Name	DEMO-PRN01
IP Address	192.168.1.10
MAC Address	00:0C:29:88:72:AA
Allowed Client Types	BOTH
Description	Corporate printer

DDNS Settings

Enabled	True
Update Mode	Dynamically update DNS A and PTR records only if requested by the DHCP clients
Update Legacy Clients	False
Enable Name Protection	False

Option	Configuration Source	Name	Vendor Name	Value(s)
003 Router	Scope	None	Standard	192.168.1.254
015 DNS Domain Name	Scope	None	Standard	demonstration.int
006 DNS Servers	Scope	None	Standard	192.168.89.2
044 WINS/NBNS Servers	Scope	None	Standard	192.168.89.2
046 WINS/NBT Node Type	Scope	None	Standard	0x8
Option 43221	Scope	None	Standard	HQNAPScope

Reservation [192.168.1.11] DEMO-PRN02

Reservation Information

Name	DEMO-PRN02
IP Address	192.168.1.11
MAC Address	00:0C:29:88:72:AB
Allowed Client Types	BOTH
Description	HP LaserJet Printer

DDNS Settings

Enabled	True
Update Mode	Dynamically update DNS A and PTR records only if requested by the DHCP clients
Update Legacy Clients	False
Enable Name Protection	False

Option	Configuration Source	Name	Vendor Name	Value(s)
003 Router	Scope	None	Standard	192.168.1.254
015 DNS Domain Name	Scope	None	Standard	demonstration.int
006 DNS Servers	Scope	None	Standard	192.168.89.2
044 WINS/NBNS Servers	Scope	None	Standard	192.168.89.2
046 WINS/NBT Node Type	Scope	None	Standard	0x8
Option 43221	Scope	None	Standard	HQNAPScope

Reservation [192.168.1.12] DEMO-WS01

Reservation Information

Name	DEMO-WS01
IP Address	192.168.1.12
MAC Address	00:0C:29:88:72:AC
Allowed Client Types	BOTH
Description	Management workstation

DDNS Settings

Enabled	True
Update Mode	Dynamically update DNS A and PTR records only if requested by the DHCP clients
Update Legacy Clients	False
Enable Name Protection	False

Option	Configuration Source	Name	Vendor Name	Value(s)
003 Router	Scope	None	Standard	192.168.1.254
015 DNS Domain Name	Scope	None	Standard	demonstration.int
006 DNS Servers	Scope	None	Standard	192.168.89.2
044 WINS/NBNS Servers	Scope	None	Standard	192.168.89.2
046 WINS/NBT Node Type	Scope	None	Standard	0x8
Option 43221	Scope	None	Standard	HQNAPScope

Leases

Leases are the IP addresses that have been made available to clients by the DHCP server at the time of the scan. When a lease is made to a client, the lease is active. Before the lease expires, the client typically needs to renew its address lease assignment with the DHCP server.

Information is not available for this section because the XIA Configuration Client was configured to not collect it.

Scope [192.168.2.0] NY

New York office

Scope Information

Name	NY
Description	New York office
Start Address	192.168.2.1
End Address	192.168.2.200
Subnet Mask	255.255.255.0
State	Enabled
DHCP Lease Duration	8 days, 0 hours, 0 minutes
BOOTP Lease Duration	Unlimited

DDNS Settings

Enabled	True
Update Mode	Dynamically update DNS A and PTR records only if requested by the DHCP clients
Update Legacy Clients	False
Enable Name Protection	False

Address Pool

An address pool defines the range of IP addresses that are available for assignment to clients by the DHCP server. Exclusions are a limited range or ranges of addresses can be defined within scope to instruct the DHCP server which addresses should not be allocated from the pool. This is typically used when a certain range of addresses within the pool are already statically assigned to network devices.

Start Address	End Address	Description
192.168.2.1	192.168.2.200	Address range for distribution

Scope Options

DHCP scope options are options configured at the scope level and are automatically inherited by reservations. When these options are specifically configured at the reservation level they override the setting configured at the scope and server level. Options configured here override options configured at the server level.

Option	Configuration Source	Name	Vendor Name	Value(s)
Option 43221	Scope	None	Standard	HQNAPScope
003 Router	Scope	None	Standard	192.168.2.254
015 DNS Domain Name	Scope	None	Standard	demonstration.int
006 DNS Servers	Scope	None	Standard	192.168.89.2
044 WINS/NBNS Servers	Scope	None	Standard	192.168.89.2
046 WINS/NBT Node Type	Scope	None	Standard	0x8

Leases

Leases are the IP addresses that have been made available to clients by the DHCP server at the time of the scan. When a lease is made to a client, the lease is active. Before the lease expires, the client typically needs to renew its address lease assignment with the DHCP server.

Information is not available for this section because the XIA Configuration Client was configured to not collect it.

IPv6 Server

The Dynamic Host Configuration Protocol version 6 (DHCPv6) provides IPv6 hosts with IP addresses, IP prefixes and/or other configuration required to operate on an IPv6 network.

Windows Server 2008 and above provides DHCPv6 support.

General Information

Operating System	Microsoft Windows Server 2012 R2 Datacenter
Audit Enabled	True
Audit Log Directory	C:\Windows\system32\dhcp
Backup Path	C:\Windows\system32\dhcp\backup
IPv4 Bindings	
IPv6 Bindings	
Conflict Detection Attempts	0
Database Directory	C:\Windows\system32\dhcp
DDNS Credentials	
Is Domain Member	False
Is Rogue	False
Version	6.3
NAP Quarantine Enabled	False
NAP Unavailable Action	Full Access

DDNS Settings

Enabled	True
Update Mode	Dynamically update DNS A and PTR records only if requested by the DHCP clients
Update Legacy Clients	False
Enable Name Protection	False

User and Vendor Classes

With user classes, you can take advantage of predefined classes that can be used to support specialized groups of clients, such as BOOTP or Routing and Remote Access clients.

Vendor classes allow the expansion of possible DHCP options with vendor specific information.

Name	Description	Class Type
Microsoft Windows Options	Microsoft vendor-specific options for Windows Clients	Vendor Class

Predefined Options

Predefined options allow the configuration of what DHCP options should be made available for configuration. Although options are defined at this level they are not assigned values or distributed to clients until they are assigned at the server, scope or reservation level.

Option	Description	Vendor Name	Value(s)
021 SIP Server Domain Name List	Domain Name of SIP servers available to the client	Standard	
024 Domain Search List	Domain search list used by clients to resolve hostnames with DNS, by preference	Standard	
029 NIS Domain List	Domain names of NIS servers available to the client	Standard	
030 NIS+ Domain Name List	Domain names of NIS+ servers available to the client	Standard	
022 SIP Servers IPv6 Address List	IPv6 addresses of SIP servers available to the client	Standard	
023 DNS Recursive Name Server IPv6 Address List	IPv6 Addresses of DNS recursive name servers available to the client	Standard	
027 NIS IPv6 Address List	IPv6 Addresses of NIS servers available to the client	Standard	
028 NIS+ IPv6 Address List	IPv6 Addresses of NIS+ servers available to the client	Standard	
031 SNTP Servers IPv6 Address List	IPv6 Addresses of SNTP servers available to the client	Standard	
032 Information Refresh Time	This option specifies an upper bound for how long a client should wait before refreshing information retrieved from DHCPv6 Server	Standard	0x15180

Server Options

DHCP server options are options configured at the server level and are automatically inherited by scopes and reservations. When these options are specifically configured at the scope or reservation level they override the setting configured at the server level.

There are no options defined.

IPv6 Scopes

A DHCP scope is the consecutive range of IP addresses that the DHCP server can provide (lease) to clients on a subnet.
Scopes typically define a single physical subnet on your network to which DHCP services are offered.

There are no IPv6 scopes defined on the server.

Version History

The version history displays the changes that have been made to the documentation of this item over time - either automatically when a change has been detected, or manually by users of the system.

Version	Username	Date	Time	Description
1.02	CENTREL-WS02\dhomer	07 May 2014	09:55	Updated notes
1.01	CENTREL-WS02\dhomer	07 May 2014	09:51	Updated by XIA Configuration Client Data
1.00	CENTREL-WS02\dhomer	07 May 2014	09:51	Initial Item Creation