

## cnMatrix DHCP Server Parameters and Commands

Commands	Description	CLI Mode
<pre>debug ip dhcp server { all   bind   errors   events   linkage   packets }</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li><code>all</code> - Generates debug traces for all failures.</li> <li><code>bind</code> - Generated traces for bind messages.</li> <li><code>errors</code> - Generates traces for error code debug messages.</li> <li><code>event</code> - Generates traces for DHCP Server status events.</li> <li><code>packets</code> - Generates traces for Database linkage messages.</li> <li><code>packets</code> - Generates traces for DHCP protocol packets related messages.</li> </ul>	Enables the tracking of the DHCP Server operations as per the configured debug levels.	Privileged EXEC
<code>[no] service dhcp-server</code>	Enables DHCP Server service on the system. The 'no' form disables DHCP Server service.	Global Configuration
<code>ip dhcp pool &lt;index (1-2147483647)&gt; [&lt;Pool Name&gt;]</code>	This command creates a DHCP server address pool and enters in to the DHCP pool configuration mode in which the pool is customized. The address pool has a range of IP addresses that can be assigned to the DHCP client and also information about client configuration parameters such as domain name.	Global Configuration
<code>no ip dhcp pool &lt;index (1-2147483647)&gt;</code>	The 'no' form of the command deletes the existing DHCP server address pool.	Global Configuration
<pre>ip dhcp { ping packets   server offer-reuse &lt;timeout (1-120)&gt; }</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li><code>ping packets</code>- Enables / disables ICMP echo mechanism. This mechanism allows the DHCP server to verify the availability of an IP address before assigning it to a DHCP client. DHCP server sends ping packets to the IP address that is intended to be assigned for the DHCP client. If the ping operation fails, DHCP server assumes that the address is not in use and assigns the</li> </ul>	This command enables ICMP echo mechanism or configures offer-reuse timeout for the DHCP server. These parameters are used to control the allocation of IP address to a DHCP client.	Global Configuration

### Copyright Notice

Copyright 2018 Cambium Networks. All rights reserved. Any unauthorized use, sharing, reproduction or distribution of these materials by any means, electronic, mechanical, or otherwise is strictly prohibited. No portion of these materials can be reproduced in any manner whatsoever, without the express written consent of the publisher.

<p>address to the requesting DHCP client.</p> <ul style="list-style-type: none"> <li>• <code>server offer-reuse</code> - Configures the amount of time (in seconds), the DHCP server entity should wait for the DHCP REQUEST from the DHCP client before reusing the lease offer for other DHCP client. This value ranges from 1 to 120 seconds.</li> </ul>		
<pre>no ip dhcp { ping packets   server offer-reuse   binding &lt;ip address&gt; }</pre>	<p>The no form of the command disables ICMP echo mechanism, resets server offer-reuse time to its default value or removes a bind entry from a server binding table.</p>	<p>Global Configuration</p>
<pre>ip dhcp option &lt;code (1- 2147483647)&gt; { ascii &lt;string&gt;   ip &lt;address&gt; }</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li>• <code>code</code> - Configures the unique DHCP option code that represents a specific DHCP option used in a DHCP OFFER message in response to a DHCP DISCOVER message.</li> <li>• <code>ascii &lt;string&gt;</code> - Configures the ASCII value to be set for the corresponding option code that accepts ASCII string.</li> <li>• <code>ip &lt;address&gt;</code> - Configures the unicast IP address to be set for the corresponding option code that accepts IP address.</li> </ul>	<p>This command sets the DHCP Server options. This command globally configures the various available DHCP server options with the corresponding specific values. These values can be an ASCII string or an IP address. These global options are applicable for all DHCP server address pools.</p>	<p>Global Configuration</p>
<pre>no ip dhcp option &lt;code (1- 2147483647)&gt;</pre>	<p>The no form of the command deletes the existing DHCP server option.</p>	<p>Global Configuration</p>
<pre>network &lt;start- IP&gt; [ { &lt;mask&gt;   / &lt;prefix-length (1-31)&gt; } ] [end ip]</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li>• <code>&lt;start-IP&gt;</code> - Configures the IP subnet address for the DHCP pool. The addresses within the specified network subnet are assigned to the DHCP client.</li> <li>• <code>&lt;mask&gt;</code> - Configures the subnet mask for the network IP address</li> <li>• <code>&lt;prefix-length (1-31)&gt;</code> - Configures the number of high-order bits in the IP address. These bits are common among all hosts within a network. This value should be preceded by a slash (/) with space before and after the slash.</li> </ul>	<p>This command creates a subnet pool that defines a network IP subnet address for the corresponding DHCP address pool and contains IP addresses to be assigned to the DHCP client.</p>	<p>DHCP Pool Configuration</p>

### Copyright Notice

Copyright 2018 Cambium Networks. All rights reserved. Any unauthorized use, sharing, reproduction or distribution of these materials by any means, electronic, mechanical, or otherwise is strictly prohibited. No portion of these materials can be reproduced in any manner whatsoever, without the express written consent of the publisher.

<ul style="list-style-type: none"> <li>• <code>&lt;end ip&gt;</code> - Configures the end IP address for the network IP subnet set for the DHCP address pool. This value restricts the IP addresses that can be assigned to the DHCP client. This value is used to manually set the end IP address.</li> </ul>		
<code>no network</code>	The no form of the command deletes the created subnet pool.	DHCP Pool Configuration
<code>[no] excluded-address &lt;low-address&gt; &lt;high-address&gt;</code>	<p>This command creates an excluded pool that defines a range of IP addresses which needs to be excluded from the created subnet pool. That is, the IP addresses in this range including start and end IP address of the excluded pool are not assigned to any DHCP client.</p> <p>The no form of the command deletes the created excluded pool. The same start IP address and end IP address of the already created excluded pool should be provided while executing the no form of the command.</p>	DHCP Pool Configuration
<code>[no] ip dhcp excluded-address &lt;low-address&gt; [&lt;high-address&gt;]</code>	This command creates an excluded pool to prevent DHCP server from assigning certain addresses to DHCP clients. The no form of the command deletes the excluded pool.	Global Configuration
<code>domain-name &lt;domain (63)&gt;</code>	This command configures the domain name option for the corresponding DHCP server address pool. A DHCP client uses this domain name while resolving host names through a domain name system. The DHCP option code is 15. This value is a string with maximum size of 63.	DHCP Pool Configuration
<code>no domain-name</code>	The no form of the command deletes the domain name option configuration for the DHCP server address pool.	DHCP Pool Configuration
<code>dns-server &lt;ip address&gt; [&lt;ip address&gt;]</code>	This command configures the IP address of a DNS server for the corresponding DHCP server address pool. The client correlates the DNS IP address with the host name. The DNS server is used to translate domain names and hostnames into corresponding IP addresses.	DHCP Pool Configuration
<code>no dns-server</code>	The no form of the command deletes the DNS server IP address option configuration for the DHCP server address pool.	DHCP Pool Configuration
<code>default-router &lt;ip address&gt;</code>	<p>This command configures the IP address of a default router to be transmitted to a DHCP Client.</p> <p>The configured IP address of the default router should be on the same subnet of the DHCP client.</p>	DHCP Pool Configuration
<code>no default-router</code>	The no form of the command deletes the default router IP address configuration for the DHCP server address pool.	DHCP Pool Configuration

### Copyright Notice

Copyright 2018 Cambium Networks. All rights reserved. Any unauthorized use, sharing, reproduction or distribution of these materials by any means, electronic, mechanical, or otherwise is strictly prohibited. No portion of these materials can be reproduced in any manner whatsoever, without the express written consent of the publisher.

<code>netbios-name-server &lt;ip address&gt;</code>	This command configures, for the corresponding DHCP server address pool, the IP address of a NetBIOS (Network Basic Input / Output System) and WINS (Windows Internet Naming Service) name server that is available to Microsoft DHCP clients.	DHCP Pool Configuration
<code>no netbios-name-server</code>	The no form of the command deletes the NetBIOS and WINS name server IP address configuration for the DHCP server address pool.	DHCP Pool Configuration
<code>netbios-node-type { &lt;0-FF&gt;   b-node   h-node   m-node   p-node }</code>	This command configures the NetBIOS node type for Microsoft DHCP clients, for the corresponding DHCP server address pool. The node type denotes the method used to register and resolve NetBIOS names to IP addresses.	DHCP Pool Configuration
<code>no netbios-node-type</code>	The no form of the command deletes the NetBIOS node type option configuration for the DHCP server address pool.	DHCP Pool Configuration
<code>option &lt;code (1-2147483647)&gt; { ascii &lt;string&gt;   ip &lt;address&gt; }</code>	This command configures, for the corresponding DHCP server address pool, the various available DHCP server options with the corresponding specific values. These values can be an ASCII string or an IP address.	DHCP Pool Configuration
<code>no option &lt;code (1-2147483647)&gt;</code>	The no form of the command deletes the DHCP server option for the DHCP server address pool.	DHCP Pool Configuration
<code>lease { &lt;days (0-365)&gt; [&lt;hours (0-23)&gt; [&lt;minutes (1-59)&gt;]]   infinite }</code>	This command configures, for the corresponding DHCP server, the DHCP lease period for an IP address that is assigned from a DHCP server to a DHCP client. The DHCP lease period represents the time interval (in seconds) until the DHCP client can use the assigned IP address.	DHCP Pool Configuration
<code>no lease</code>	The no form of the command resets the DHCP lease period to its default value of 3600 seconds for the DHCP server address pool.	DHCP Pool Configuration
<code>utilization threshold { &lt;integer (0-100)&gt; }</code>	This command configures pool utilization threshold value (in percentage) for the corresponding DHCP server address pool.	DHCP Pool Configuration
<code>no utilization threshold</code>	The no form of the command resets the pool utilization threshold to its default value - 75% - for the DHCP server address pool.	DHCP Pool Configuration
<code>host hardware-type &lt;type (1-255)&gt; client-identifier &lt;mac-address&gt; { ip &lt;address&gt;   option &lt;code (1-2147483647)&gt; { ascii &lt;string&gt;   ip &lt;address&gt; } }</code>	This command configures host hardware type and its DHCP option with specific values for the corresponding DHCP server address pool.  Hardware type of value 1 is associated with Ethernet type.	DHCP Pool Configuration
<code>no host hardware-type &lt;host-hardware-type (1-2147483647)&gt;</code>	The no form of the command deletes the hardware type and its DHCP option.	DHCP Pool Configuration
<code>ip dhcp sip-server { {domain &lt;string&gt; [&lt;string&gt;] }   {ip &lt;ip_addr&gt; [&lt;ip_addr&gt;] } }</code>	This command sets SIP Servers in the global DHCP server configuration parameters.	Global Configuration

### Copyright Notice

Copyright 2018 Cambium Networks. All rights reserved. Any unauthorized use, sharing, reproduction or distribution of these materials by any means, electronic, mechanical, or otherwise is strictly prohibited. No portion of these materials can be reproduced in any manner whatsoever, without the express written consent of the publisher.

<code>no ip dhcp sip-server</code>	The no form of the command deletes SIP Servers from the global DHCP server configuration parameters.	Global Configuration
<code>ip dhcp ntp-server &lt;ip address&gt; [&lt;ip address&gt;]</code>	This command sets NTP Servers in the global DHCP server configuration parameters.	Global Configuration
<code>no ip dhcp ntp-server</code>	The no form of the command deletes NTP Server from the global DHCP server configuration parameters.	Global Configuration
<code>ip dhcp dns-server &lt;ip address&gt; [&lt;ip address&gt;]</code>	This command sets DNS Servers in the global DHCP server configuration parameters	Global Configuration
<code>no ip dhcp dns-server</code>	The no form of the command deletes DNS Server from the global DHCP server configuration parameters.	Global Configuration
<code>ntp-server &lt;ip address&gt; [&lt;ip address&gt;]</code>	This command sets NTP Servers in the pool specific DHCP server configuration parameters.	DHCP Pool Configuration
<code>no ntp-server</code>	The no form of the command deletes NTP Server from the pool specific DHCP server configuration parameters.	DHCP Pool Configuration
<code>sip-server { {domain &lt;string&gt; [&lt;string&gt;]}   {ip &lt;ip_addr&gt; [&lt;ip_addr&gt;]} }</code>	This command sets SIP Servers in the pool specific DHCP server configuration parameters.	DHCP Pool Configuration
<code>no sip-server</code>	The no form of the command deletes SIP Server from the pool specific DHCP server configuration parameters.	DHCP Pool Configuration
<code>show ip dhcp server information</code>	This command displays the DHCP server configuration information. The information contains status of DHCP server, ICMP echo mechanism status, debug level, boot server IP address, boot file name and server offer reuse time.	Privileged EXEC
<code>show ip dhcp server pools</code>	This command displays the global DHCP option configuration for all DHCP server address pools and configuration information such as utilization threshold, of address pools for which subnet pool is created or host options are configured.	Privileged EXEC
<code>show ip dhcp server binding</code>	This command displays the DHCP server binding information. A DHCP binding is created when a DHCP server assigns an IP address to a DHCP client. The information contains the allocated IP address, host hardware type, host hardware address, binding state and expiry time of the allocated DHCP lease.	Privileged EXEC
<code>show ip dhcp server statistics</code>	This command displays various DHCP server statistics related information such as number of DHCPDECLINE messages received, DHCPPOFFER messages sent and so on.	Privileged EXEC
<code>clear ip dhcp server statistics</code>	This command clears the DHCP server statistics	Privileged EXEC

### Copyright Notice

Copyright 2018 Cambium Networks. All rights reserved. Any unauthorized use, sharing, reproduction or distribution of these materials by any means, electronic, mechanical, or otherwise is strictly prohibited. No portion of these materials can be reproduced in any manner whatsoever, without the express written consent of the publisher.