






# cnMatrix RSTP Parameters and Commands

Commands	Description	CLI Mode
<pre>spanning-tree mode</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li>• mst</li> <li>• rst</li> <li>• pvrst</li> </ul>	<p>Sets the type of spanning tree to be executed, enables spanning tree operation and starts spanning tree functionality in the switch.</p>	Global Configuration
<pre>no spanning-tree</pre>	<p>Disables the spanning tree operation in the switch.</p>	Global Configuration
<pre>spanning-tree compatibility {stp   rst   mst}</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li>• stp</li> <li>• rst</li> <li>• mst</li> </ul> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="border: 1px solid orange; padding: 5px; background-color: #f9cb9c;">  <p>The STP compatibility version cannot be set as mst, if the spanning tree Mode is set as rst.</p> </div> <div style="border: 1px solid orange; padding: 5px; background-color: #f9cb9c;">  <p>This configuration is useful during cases where spanning tree Mode itself is not required to be changed.</p> </div> </div>	<p>Sets the STP compatibility version in the switch for all ports. The compatibility version allows the switch to temporarily operate (that is, till this configuration is reset manually) in other STP version even though the spanning tree Mode is set as some other version.</p>	Global Configuration
<pre>spanning-tree {forward-time &lt;seconds(4-30)&gt;   hello-time &lt;seconds(1-2)&gt;   max-age &lt;seconds(6-40)&gt;}</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li>• forward-time</li> <li>• hello-time</li> <li>• max-age</li> </ul>	<p>Sets the spanning tree timers such as hello time used for controlling the transmission of BPDUs during the computation of loop free topology.</p>	Global Configuration
<pre>spanning-tree transmit hold-count &lt;value(1-10)&gt;</pre> <div style="border: 1px solid orange; padding: 5px; background-color: #f9cb9c; margin-top: 10px;">  <p>If the spanning tree mode is set as mst, the default values is 6 and if the spanning tree mode is set as rst or pvrst, the default value is 3.</p> </div>	<p>Sets the transmit hold-count value for the switch, where the value is a counter that is used to limit the maximum transmission rate of the switch and to avoid flooding. This value specifies the maximum number of packets that can be sent in a given hello time interval. This value ranges from 1 to 10.</p>	Global Configuration
<pre>clear spanning-tree counters[interface &lt;interface-type&gt; &lt;interface-id&gt;]</pre>	<p>Deletes all bridge and port level spanning tree statistics information.</p>	Global Configuration
<pre>spanning-tree pathcost dynamic [lag-speed]</pre> <p>The following parameter is available for this command:</p> <ul style="list-style-type: none"> <li>• lag-speed - Calculates the path cost for change in speed of the port.</li> </ul>	<p>Enables dynamic pathcost calculation feature in the switch.</p>	Global Configuration
<pre>spanning-tree priority &lt;value(0-61440)&gt;</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li>• mst &lt;instance-id&gt; - configures</li> </ul>	<p>Configures the priority value that is assigned to the switch.</p>	Global Configuration

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<p>the ID of MSTP instance already created in the switch.</p> <ul style="list-style-type: none"> <li><code>priority &lt;value (0-61440)&gt;</code> - configures the priority value for the switch and for the MSTI, in RSTP and MSTP respectively.</li> </ul>		
<code>spanning-tree auto-edge</code>	Enables automatic detection of Edge port parameter of an interface.	
<pre>spanning-tree [{cost &lt;value(0-200000000)&gt; disable link-type{point-to-point shared} portfast port-priority &lt;value(0-240)&gt;}]</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li><code>cost &lt;value(0-200000000)&gt;</code> - port's path cost value.</li> <li><code>disable</code> - disables the spanning tree operation on the port.</li> <li><code>link-type</code> - Configures the link status of the LAN segment attached to the port. The following options are available: <ul style="list-style-type: none"> <li><code>point-to-point</code> – The port is treated as if it is connected to a point-to-point link.</li> <li><code>shared</code> - The port is treated as if it is using a shared media connection.</li> </ul> </li> <li><code>portfast</code></li> <li><code>port-priority &lt;value(0-240)&gt;</code> - configures the priority value assigned to the port.</li> </ul>	Configures the port related spanning tree information for all kinds of STPs.	Interface Configuration (Physical Interface)
<pre>spanning-tree portfast {bpdufilter default   default}</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li><code>bpdufilter default</code> - enables BPDU filtering on all PortFast ports.</li> <li><code>default</code> - enables PortFast by default on all access ports.</li> </ul>	Configures the portfast of the non-trunk ports as bpdufilter default or bpduguard default or default.	Global Configuration
<code>spanning-tree restricted-role</code>	Enables the restricted role feature for a port.	Interface Configuration (Physical Interface)
<code>spanning-tree restricted-tcn</code>	Enables the topology change guard / restricted TCN feature on a port.	Interface Configuration (Physical Interface)
<code>spanning-tree layer2-gateway-port</code>	Configures a port to operate as a L2GP.	Interface Configuration (Physical Interface)
<pre>spanning-tree bpdu-receive {enabled   disabled}</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li><code>enabled</code> - allows normal processing of BPDUs received on the port.</li> <li><code>disabled</code> - discards the BPDUs received on the port.</li> </ul>	Configures the processing status of the BPDUs received in a port.	Interface Configuration (Physical Interface)
<pre>spanning-tree bpdu-transmit {enabled   disabled}</pre>	Configures the BPDU transmission status of a port.	Interface Configuration (Physical Interface)

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<p>Available options:</p> <ul style="list-style-type: none"> <li><code>enabled</code> - allows the transmission of BPDUs from the port.</li> <li><code>disabled</code> - blocks the transmission of BPDUs from the port.</li> </ul>	 <p>The BPDU transmission status cannot be enabled on the port that is configured as L2GP.</p>	
<pre>spanning-tree loop-guard</pre>  <p>This feature can be configured, only if the spanning tree functionality is not shut down in the switch.</p>	Enables the loop guard feature in a port.	Interface Configuration (Physical Interface)
<pre>spanning-tree [mst &lt;instance-id&gt;] pseudoRootId priority &lt;value(0-61440)&gt; mac-address &lt;ucast_mac&gt;</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li><code>mst &lt;instance-id&gt;/ mst &lt;instance-id(1-64)&gt;</code></li> <li><code>priority &lt;value(0-61440)&gt;</code></li> <li><code>mac-address</code></li> </ul>	Configures the pseudo root related information for a port set as L2GP.	Interface Configuration (Physical Interface)
<pre>clear spanning-tree detected protocols [{interface &lt;interface-type&gt; &lt;interface-id&gt;}]</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li><code>interface &lt;interface-type&gt; &lt;interface-id&gt;</code> - restarts the protocol migration process on the specified interface.</li> </ul>	Restarts the protocol migration process on all interfaces in the switch and forces renegotiation with the neighboring switches.	Privileged EXEC
<pre>show spanning-tree detail</pre>	Displays detailed spanning tree related information of the switch and all ports enabled in the switch.	Privileged EXEC
<pre>show spanning-tree active [detail]</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li><code>detail</code></li> </ul>	Displays spanning tree related information available in the switch for the current STP enabled in the switch.	Privileged EXEC
<pre>show spanning-tree interface &lt;interface-type&gt; &lt;interface-id&gt; [{cost   encapsulationtype   priority   portfast   rootcost   restricted-role   restricted-tcn   state   stats   detail }]</pre>	Displays the port related spanning tree information for the specified interface.	Privileged EXEC
<pre>show spanning-tree root [{ address   cost   forward-time   id   max-age   port   priority   detail }]</pre> <p>Available options:</p> <ul style="list-style-type: none"> <li><code>address</code> - displays the MAC address of the root bridge.</li> <li><code>cost</code> - displays the cost of the root bridge.</li> <li><code>forward-time</code> - displays the forward delay time of the root bridge.</li> <li><code>id</code> - displays the ID of the root bridge.</li> </ul>	Displays the spanning tree root information.	Privileged EXEC

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<ul style="list-style-type: none"> <li><code>max-age</code> - displays the maximum age time of the root bridge.</li> <li><code>port</code> - displays the ID of the root port.</li> <li><code>priority</code> - displays the priority of the root bridge.</li> <li><code>detail</code> - displays the root priority, root address, root cost, root port, forward delay time and maximum age time.</li> </ul>		
<code>show spanning-tree bridge [{ address   forward-time   hello-time   id   max-age   protocol   priority   detail }]</code>	Displays the spanning tree bridge information.	Privileged EXEC
<code>show spanning-tree [interface &lt;interface-type&gt; &lt;interface-id&gt; layer2-gateway-port</code> <b>Available options:</b> <ul style="list-style-type: none"> <li><code>&lt;interface-type&gt;</code></li> <li><code>&lt;interface-id&gt;</code></li> </ul>	Displays the spanning tree information for all L2GPs enabled in the switch.	Privileged EXEC
<code>spanning-tree forwarddelay optimization alternate-role {enabled   disabled}</code>	Enables or disables the optimization for spanning-tree related protocol during transition from alternate to designated port role.	Global Configuratio
<code>show spanning-tree interface &lt;ifnum&gt; bpduguard</code> <b>Available options:</b> <ul style="list-style-type: none"> <li><code>&lt;ifnum&gt;</code> - the spanning-tree bpduguard configuration for the specified interface identifier.</li> <li><code>Bpduguard</code> - the status of the BPDU guard feature for the interface.</li> </ul>	Displays the spanning-tree bpduguard configuration for RSTP, MSTP and PVRST	Privileged EXEC
<code>show spanning-tree performance-data [interface &lt;interface-type&gt; &lt;interface-id&gt;]</code>	Displays the spanning-tree performance data for RSTP and MSTP.	Privileged EXEC
<code>spanning-tree bpduguard {disable   enable   none}</code>	Configures the status of BPDU guard feature in an interface.	Interface Configuration (Physical Interface)
<code>show spanning-tree interface &lt;ifnum&gt; inconsistency</code>	Displays the spanning-tree root and loop inconsistent state information for RSTP, MSTP & PVRST.	Privileged EXEC
<code>set performance-data-status {enable   disable}</code>	Enables or disables the collection of performance data for the for RSTP and MSTP protocol.	Privileged EXEC
<code>spanning-tree bpdufilter {disable   enable }</code>	Configures the status of BPDU filter feature in an interface.	Interface Configuration (Physical Interface)