

1. **Case 1**

XML with XCONNCT DELETE and XCONNECT CREATE

<pre> A1-MDR#show running-config interface gigabitEthernet 9/1 Building configuration...  Current configuration : 1489 bytes ! interface GigabitEthernet9/1  description porta per TEST NSO Valerio  mtu 9216  service instance 150 ethernet   encapsulation dot1q 150   rewrite ingress tag pop 1 symmetric   service-policy input IN   service-policy output OUT   xconnect 172.16.12.1 250150 encapsulation mpls   mtu 9202 </pre>	<p><b>IOS CLI Configuration</b></p>
<pre> nso@nscs# show running-config devices device A1-MDR config ios:interface GigabitEthernet 9/1   display service-meta-data devices device A1-MDR config  ios:interface GigabitEthernet9/1   description  porta per TEST NSO Valerio   no switchport   service instance 150 ethernet   encapsulation dot1q 150   rewrite ingress tag pop 1 symmetric   service-policy input IN   service-policy output OUT   xconnect 172.16.12.1 250150 encapsulation mpls   no mpls control-word   mtu 9202   exit  exit </pre>	<p><b>IOS NSO CLI CONFIGURATION SERVICE-META- DATA  PRE SERVICES</b></p>
<pre> &lt;GigabitEthernet when="{\${remotePortType = 'GigabitEthernet'}}"&gt;   &lt;name&gt;\${remotePortId}&lt;/name&gt;   &lt;service&gt;     &lt;instance&gt;       &lt;id&gt;\${remoteServiceInstance}&lt;/id&gt;       &lt;xconnect tags="delete"&gt;         &lt;address&gt;\${neighborRemote}&lt;/address&gt;         &lt;vcid&gt;\${pwIdRemote}&lt;/vcid&gt;         &lt;encapsulation&gt;mpls&lt;/encapsulation&gt;       &lt;/xconnect&gt;       &lt;xconnect tags="create"&gt;         &lt;address&gt;\${localL9New}&lt;/address&gt;         &lt;vcid&gt;\${pwIdNew}&lt;/vcid&gt;         &lt;encapsulation&gt;mpls&lt;/encapsulation&gt;         &lt;backup when="{\${neighborRemoteBk != 'None'}}"&gt;           &lt;peer&gt;             &lt;peer-router-ip-addr&gt;\${neighborRemoteBk}&lt;/peer-router-ip-addr&gt;             &lt;vcid&gt;\${pwIdRemoteBk}&lt;/vcid&gt;           &lt;/peer&gt;         &lt;/backup&gt;         &lt;mtu&gt;\${remoteMtu}&lt;/mtu&gt;       &lt;/xconnect&gt;     &lt;/instance&gt;   &lt;/service&gt; &lt;/GigabitEthernet&gt; </pre>	<p><b>IOS – XML Template</b></p>
<pre> Evaluating "\${remoteDevice}" (from file "OPM-Feeder-IOS.xml", line 45) Context node: /services/movePWService:movePWService[name='mau2'] Result: "A1-MDR" Operation 'merge' on existing node: /devices/device[name='A1-MDR'] (from file "OPM-Feeder-IOS.xml", line 45) Evaluating conditional expression "boolean(\${remotePortType = 'GigabitEthernet'})" (from file "OPM-Feeder-IOS.xml", line 73) Context node: /services/movePWService:movePWService[name='mau2'] Result: true - continuing Evaluating "\${remotePortId}" (from file "OPM-Feeder-IOS.xml", line 74) Context node: /services/movePWService:movePWService[name='mau2'] Result: "9/1" </pre>	<p><b>Commit dry-run / debug template</b></p>

<pre> Operation 'merge' on existing node: /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1'] (from file "OPM-Feeder-IOS.xml", line 74) Evaluating "\$remoteServiceInstance" (from file "OPM-Feeder-IOS.xml", line 77) Context node: /services/movePWService:movePWService[name='mau2'] Result: "150" Operation 'merge' on existing node: /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1']/service/instance[id='150'] (from file "OPM-Feeder-IOS.xml", line 77) Operation 'delete' on node: /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1']/service/instance[id='150']/xconnect (from file "OPM-Feeder-IOS.xml", line 78) Operation 'create' on node: /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1']/service/instance[id='150']/xconnect (from file "OPM-Feeder-IOS.xml", line 83) Operation 'create' on node: /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1']/service/instance[id='150']/xconnect/address (from file "OPM-Feeder-IOS.xml", line 84) Evaluating "\$localL9New" (from file "OPM-Feeder-IOS.xml", line 84) Context node: /services/movePWService:movePWService[name='mau2'] Result: "172.16.12.2" Setting /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1']/service/instance[id='150']/xconnect/address to "172.16.12.2" Operation 'create' on node: /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1']/service/instance[id='150']/xconnect/vcid (from file "OPM-Feeder-IOS.xml", line 85) Evaluating "\$pwiDNew" (from file "OPM-Feeder-IOS.xml", line 85) Context node: /services/movePWService:movePWService[name='mau2'] Result: "1234567" Setting /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1']/service/instance[id='150']/xconnect/vcid to "1234567" Evaluating conditional expression "boolean(\$neighborRemoteBk != 'None')" (from file "OPM-Feeder-IOS.xml", line 86) Context node: /services/movePWService:movePWService[name='mau2'] Result: false - skipping siblings Operation 'create' on node: /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1']/service/instance[id='150']/xconnect/mtu (from file "OPM-Feeder-IOS.xml", line 92) Evaluating "\$remoteMtu" (from file "OPM-Feeder-IOS.xml", line 92) Context node: /services/movePWService:movePWService[name='mau2'] Result: "9202" Setting /devices/device[name='A1-MDR']/config/ios:interface/GigabitEthernet[name='9/1']/service/instance[id='150']/xconnect/mtu to "9202" Evaluating conditional expression "boolean(\$remotePortType = 'Port-channel')" (from file "OPM-Feeder-IOS.xml", line 120) Context node: /services/movePWService:movePWService[name='mau2'] Result: false - skipping siblings Evaluating conditional expression "boolean(\$remotePortType = 'TenGigabitEthernet')" (from file "OPM-Feeder-IOS.xml", line 97) Context node: /services/movePWService:movePWService[name='mau2'] Result: false - skipping siblings </pre>	
<pre> Commit performed by nso via ssh using cli. nso@n3c# show running-config devices device A1-MDR config ios:interface GigabitEthernet 9/1   display service-meta-data devices device A1-MDR config ! Refcount: 2 ! Backpointer: [ /ncs:services/movePWService:movePWService[movePWService:name='mau2'] ] ios:interface GigabitEthernet9/1 description porta per TEST NSO Valerio no switchport ! Refcount: 2 ! Backpointer: [ /ncs:services/movePWService:movePWService[movePWService:name='mau2'] ] service instance 150 ethernet encapsulation dot1q 150 rewrite ingress tag pop 1 symmetric service-policy input IN service-policy output OUT ! Refcount: 2 ! Backpointer: [ /ncs:services/movePWService:movePWService[movePWService:name='mau2'] ] xconnect 172.16.12.2 1234567 encapsulation mpls no mpls control-word ! Refcount: 2 ! Originalvalue: 9202 mtu 9202 exit exit </pre>	<p><b>IOS NSO CLI CONFIGURATION SERVICE-META- DATA</b></p> <p><b>POST COMMIT SERVICES</b></p>
<pre> A1-MDR#show running-config interface gigabitEthernet 9/1 interface GigabitEthernet9/1 description porta per TEST NSO Valerio mtu 9216 service instance 150 ethernet encapsulation dot1q 150 rewrite ingress tag pop 1 symmetric service-policy input IN service-policy output OUT xconnect 172.16.12.2 1234567 encapsulation mpls ! </pre>	<p><b>IOS CLI CONFIGURATION POST COMMIT</b></p>

<b>ROLLBACK</b>	
<pre>nso@ncs(config)# no services movePWService mau2 nso@ncs(config)# commit</pre>	
<pre>A1-MDR#show running-config interface gigabitEthernet 9/1 Building configuration...  Current configuration : 1488 bytes ! interface GigabitEthernet9/1   description porta per TEST NSO Valerio   mtu 9216   service instance 150 ethernet   encapsulation dot1q 150   rewrite ingress tag pop 1 symmetric   service-policy input IN   service-policy output OUT   xconnect 172.16.12.1 250150 encapsulation mpls !</pre>	<b>IOS CLI Configuration</b>
<pre>nso@ncs# show running-config devices device A1-MDR config ios:interface GigabitEthernet 9/1   display service-meta-data devices device A1-MDR config   ios:interface GigabitEthernet9/1     description  porta per TEST NSO Valerio     no switchport     service instance 150 ethernet     encapsulation dot1q 150     rewrite ingress tag pop 1 symmetric     service-policy input IN     service-policy output OUT     xconnect 172.16.12.1 250150 encapsulation mpls       no mpls control-word       <b>mtu 9202</b>     exit   exit</pre>	<b>IOS NSO CLI CONFIGURATION SERVICE-META- DATA  POST ROLLBACK SERVICES</b>
<b>RE-SYNC</b>	
<pre>nso@ncs# devices device A1-MDR sync-from result true nso@ncs# show running-config devices device A1-MDR config ios:interface GigabitEthernet 9/1   display service-meta-data devices device A1-MDR config   ios:interface GigabitEthernet9/1     description  porta per TEST NSO Valerio     no switchport     service instance 150 ethernet     encapsulation dot1q 150     rewrite ingress tag pop 1 symmetric     service-policy input IN     service-policy output OUT     xconnect 172.16.12.1 250150 encapsulation mpls       no mpls control-word     exit   exit</pre>	<b>IOS NSO CLI CONFIGURATION SERVICE-META- DATA  POST RE-SYNC</b>