

AAI-CCVPN Schema Proposal for Casablanca Release

References

- [AAI-1353](#) - Support CCVPN use case in AAI CLOSED
- CCVPN(Cross Domain and Cross Layer VPN) USE CASE
- CCVPN Closed Loop
- CCVPN Use Case IM Proposal Depreciated in R4
- CCVPN Use Case Resource IM Proposal
- ONAP R3 Modeling working space

Attention to

- PTL AAI [James Forsyth](#)
- PTL Modeling [Hui Deng](#)
- [Chandra Cinthala](#)
- PTL SO [Seshu Kumar Mudiganti](#)
- PTL UIUI [Tao Shen](#)
- Sub-C Chair Architecture [Chris Donley](#)

Diagrams

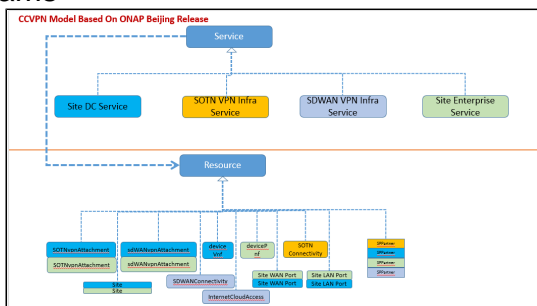


Figure 1:

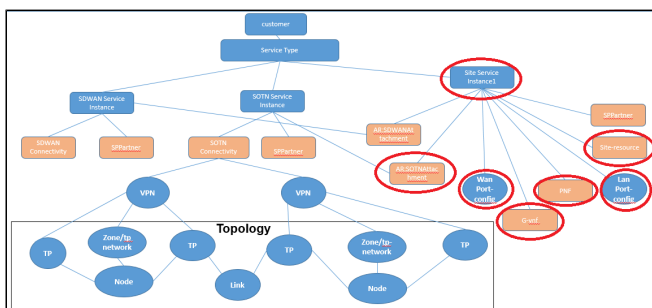


Figure 3:

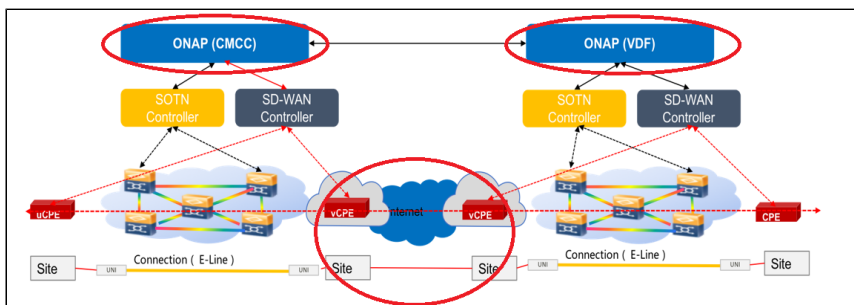
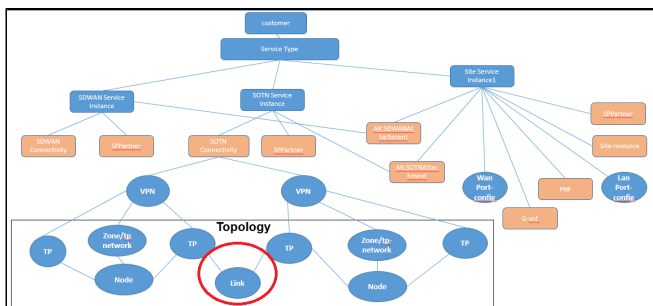
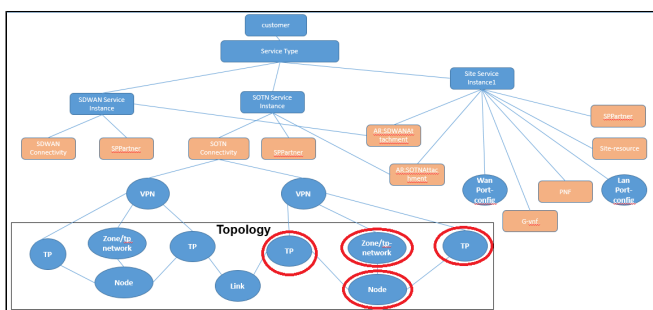
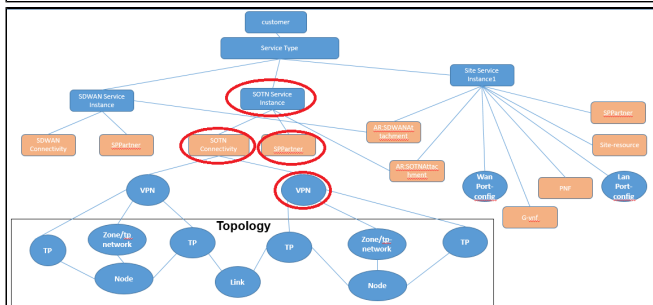
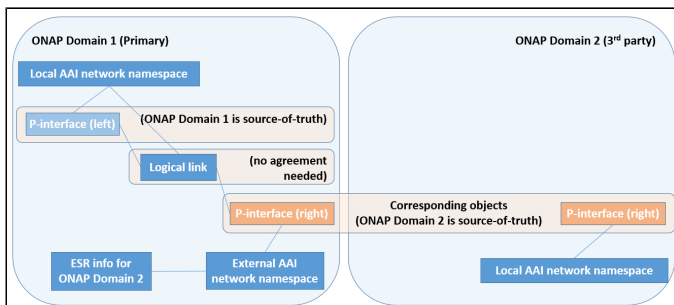
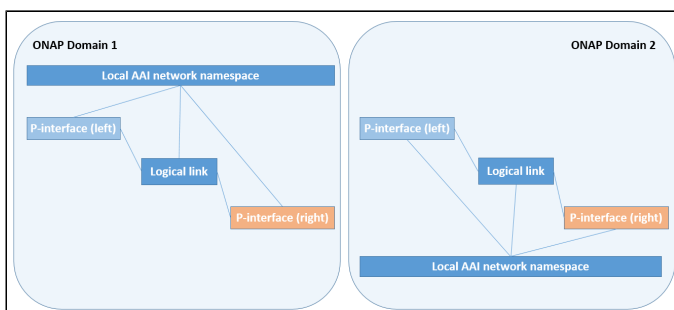


Figure 5:



AAI-1353-1		<p>aai_schema_v13.xsd</p> <ul style="list-style-type: none">• "network"• "business"	<p>Update existing "network" and "business" entry points to graph for new proposed elements:</p> <div data-bbox="987 199 1485 1293"><p>Mockup Schema (OXM)</p><pre><java-type name="Network"> <xml-root-element name="network"/> <java-attributes> <xml-element name="connectivities" type="inventory.aai.onap.org.v14. Connectivities"/> <xml-element name="lan-port-configs" type="inventory.aai.onap.org.v14. LanPortConfigs"/> <xml-element name="network-resources" type="inventory.aai.onap.org.v14. NetworkResources"/> <xml-element name="site-resources" type="inventory.aai.onap.org.v14. SiteResources"/> <xml-element name="sdwan-vpns" type="inventory.aai.onap.org.v14. SdwanVpns"/> <xml-element name="devices" type="inventory.aai.onap.org.v14. Devices"/> <xml-element name="wan-port-configs" type="inventory.aai.onap.org.v14. WanPortConfigs"/> <xml-element name="ext-aai-networks" type="inventory.aai.onap.org.v14. ExtAaiNetworks"/> </java-attributes> </java-type> <java-type name="Business"> <xml-root-element name="business"/> <java-attributes> <xml-element name="sp-partners" type="inventory.aai.onap.org.v14. SpPartners"/> </java-attributes> </java-type></pre></div>
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AAI-1353-2	<p>SOTN Infra</p> <p>Closed Loop</p> <p>Site Service Instance</p> <p>Notes:</p> <p>See Figure 2 above.</p> <p>Use existing class of objects.</p> <p>Closed loop scenario:</p> <ul style="list-style-type: none"> • SO will create "service-instance" object in AAI • SO will store "customer-request" string on service-instance object in AAI • When Closed Loop call recreates the "service-instance", it will query "service-instance" information first, to get the "customer-request" 	<p>aai_schema_v13.xsd</p> <ul style="list-style-type: none"> • "service-instance" • "service-instances" 	<p>add properties to existing "service-instance" object:</p> <div data-bbox="987 178 1484 525"> <p>Mockup Schema (OXM)</p> <pre><java-type name="ServiceInstance"> <xml-root-element name="service-instance"/> <java-attributes> <xml-element name="input-parameters" type="java.lang.String"/> </java-attributes> </java-type></pre> </div> <div data-bbox="987 541 1484 1249"> <p>Mockup API</p> <p>URL: https://<AAI host>:<AAI port>/aai/v14/business/customers/customer/{global-customer-id}/service-subscriptions/service-subscription/{service-type}/service-instances/service-instance/{service-instance-id}</p> <p>Method: PUT</p> <p>Request Body:</p> <pre>{ service-instance-id: "{service-instance-id}", service-instance-name: "instance name", service-type: "some type", service-role: "some role", resource-version: "some version", model-invariant-id: "model id", model-version-id: "model version", input-parameters: "request parameters" }</pre> </div>
AAI-1353-3	<p>SOTN Connectivity</p> <p>Notes:</p> <p>See Figure 2 above.</p> <p>Proposal for specific new class of "connectivity" objects.</p>	<p>aai_schema_v13.xsd</p> <ul style="list-style-type: none"> • "service-instance" • "vpn-bindings" 	<p>new element "connectivity" and new element "connectivities":</p>

Mockup Schema (OXM)

```
<java-type name="Connectivity">
  <xml-root-element name="connectivity"
  />
  <java-attributes>
    <xml-element name="connectivity-id"
type="java.lang.String"/>
    <xml-element name="bandwidth-profile-
name" type="java.lang.String"/>
    <xml-element name="vpn-type" type="
java.lang.String"/>
    <xml-element name="cir" type="java.
lang.String"/>
    <xml-element name="eir" type="java.
lang.String"/>
    <xml-element name="cbs" type="java.
lang.String"/>
    <xml-element name="ebs" type="java.
lang.String"/>
    <xml-element name="color-aware"
type="java.lang.String"/>
    <xml-element name="coupling-flag"
type="java.lang.String"/>
    <xml-element name="etht-svc-name"
type="java.lang.String"/>
    <xml-element name="access-provider-
id" type="java.lang.String"/>
    <xml-element name="access-client-id"
type="java.lang.String"/>
    <xml-element name="access-topology-
id" type="java.lang.String"/>
    <xml-element name="access-node-id"
type="java.lang.String"/>
    <xml-element name="access-ltp-id"
type="java.lang.String"/>
    <xml-element name="connectivity-
selflink" type="java.lang.String"/>
    <xml-element name="cvlan" type="java.
lang.String"/>
    <xml-element name="operational-
status" type="java.lang.String"/>
    <xml-element name="model-
customization-id" type="java.lang.
String"/>
    <xml-element name="model-version-id"
type="java.lang.String"/>
    <xml-element name="model-invariant-
id" type="java.lang.String"/>
    <xml-element name="relationship-
list"
      type="inventory.aai.onap.org.v14.
RelationshipList"/>
  </java-attributes>
</java-type>

<java-type name="Connectivities">
  <xml-root-element name="
connectivities"/>
  <java-attributes>
    <xml-element name="connectivity"
container-type="java.lang.ArrayList"
      type="inventory.aai.onap.org.v14.
Connectivity"/>
  </java-attributes>
</java-type>
```

Mockup API

URL: https://<AAI host>:<AAI port>/aai/vl4/network/connectivities/connectivity/{connectivityId}
Method: PUT
Request Body:

```
{
  "connectivity-id":
  "{connectivityId}",
  "bandwidth-profile-name": "a name",
  "vpn-type": "a type",
  "cir": "cir value",
  "eir": "eir value",
  "cbs": "cbs value",
  "ebs": "ebs value",
  "color-aware": "color value",
  "coupling-flag": "flag value",
  "etht-svc-name": "some name",
  "access-provider-id": "provider
id",
  "access-client-id": "client id",
  "access-topology-id": "topology
id",
  "access-node-id": "node id",
  "access-ltp-id": "ltp id",
  "connectivity-selflink": "some
link",
  "cvlan": "some tag",
  "operational-status": "some
status",
  "model-customization-id": "some
customization",
  "model-version-id": "some version",
  "model-invariant-id": "some
invariant",
  "relationship-list": {
    "relationship" : [
      {
        "related-to": "service-
instance",
        "related-link": "url
of service-instance",
        "relationship-data": [
          "relationship-
key": "service-instance.service-
instance-id",
          "relationship-
value": "some id"
        ]
      },
      {
        "related-to": "vpn-
binding",
        "related-link": "url
of vpn-binding",
        "relationship-data": [
          "relationship-
key": "vpn-binding.vpn-id",
          "relationship-
value": "some id"
        ]
      }
    ]
  }
}
```

AAI-1353-4	<p>VPN</p> <p>Notes:</p> <p>See Figure 2 above.</p> <p>Update existing class of objects.</p>	<p>aai_schema_v13.xsd</p> <ul style="list-style-type: none">• "vpn-binding"• "vpn-bindings"	<p>add properties to existing "vpn-binding" object:</p> <div data-bbox="977 195 1485 1161"><p>Mockup Schema (OXM)</p><pre><java-type name="VpnBinding"> <xml-root-element name="vpn-binding" /> <java-attributes> <xml-element name="access-provider-id" type="java.lang.String" /> <xml-element name="access-client-id" type="java.lang.String" /> <xml-element name="access-topology-id" type="java.lang.String" /> <xml-element name="access-node-id" type="java.lang.String" /> <xml-element name="access-ltp-id" type="java.lang.String" /> <xml-element name="src-access-node-id" type="java.lang.String" /> <xml-element name="src-access-ltp-id" type="java.lang.String" /> <xml-element name="dst-access-node-id" type="java.lang.String" /> <xml-element name="dst-access-ltp-id" type="java.lang.String" /> <xml-element name="operational-status" type="java.lang.String" /> <xml-element name="model-customization-id" type="java.lang.String" /> <xml-element name="model-version-id" type="java.lang.String" /> <xml-element name="model-invariant-id" type="java.lang.String" /> </java-attributes> </java-type></pre></div>
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		<div><div>Mockup API</div><div>URL: https://<AAI host>:<AAI port>/aai/vl4/network/vpn-bindings/vpn-binding/vpnId Method: PUT Request Body: { "vpn-id": "vpnId", "vpn-name": "vpn name", "access-provider-id": "provider id", "access-client-id": "client id", "access-topology-id": "topology id", "src-access-node-id": "src node id", "src-access-ltp-id": "src ltp id", "dst-access-node-id": "dst node id", "dst-access-ltp-id": "dst ltp id", "operational-status": "some status", "model-customization-id": "some customization", "model-version-id": "some version", "model-invariant-id": "some invariant" }</div></div>
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AAI-1353-5	<p>SP Partner</p> <p>Notes:</p> <p>See Figure 2 above.</p> <p>Proposal for specific new class of "sp-partner" objects.</p>	<p>aai_schema_v13.xsd</p> <ul style="list-style-type: none">• "service - instances"	<p>new element "sp-partner" and new element "sp-partners":</p> <div data-bbox="977 178 1485 911"><p>Mockup Schema (OXM)</p><pre><java-type name="SpPartner"> <xml-root-element name="sp-partner"/> <java-attributes> <xml-element name="sp-partner-id" type="java.lang.String"/> <xml-element name="url" type="java. lang.String"/> <xml-element name="callsource" type=" java.lang.String"/> <xml-element name="relationship- list" type="inventory.aai.onap.org.v14. RelationshipList"/> </java-attributes> </java-type> <java-type name="SpPartners"> <xml-root-element name="sp-partners"/> <java-attributes> <xml-element name="sp-partner" type="inventory.aai.onap.org.v14. SpPartner"/> </java-attributes> </java-type></pre></div> <div data-bbox="977 932 1485 1770"><p>Mockup API</p><p>URL: https://<AAI host>:<AAI port>/aai/v14/business/sp-partners/sp-partner/partnerId</p><p>Method: PUT</p><p>Request Body:</p><pre>{ "sp-partner-id": "partnerId", "url": "partner url", "callsource": "some source", "relationship-list": { "relationship" : [{ "related-to": "service- instance", "related-link": "url of service-instance", "relationship-data": [{ "relationship- key": "service-instance.service- instance-id", "relationship- value": "some id" }] }] } }</pre></div>
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AAI-1353-6	<p>SOTN Attachment</p> <p>Notes:</p> <p>See Figure 3 above.</p> <p>Update existing class of objects.</p>	<p>aai_schema_v13.xsd</p> <ul style="list-style-type: none"> "allotted-resource" "allotted-resources" 	<p>add properties to existing "allotted-resource" object:</p> <div data-bbox="987 178 1487 884"> <p>Mockup Schema (OXM)</p> <pre><java-type name="AllottedResource"> <xml-root-element name="allotted-resource"/> <java-attributes> <xml-element name="allotted-resource-name" type="java.lang.String"/> <xml-element name="access-provider-id" type="java.lang.String"/> <xml-element name="access-client-id" type="java.lang.String"/> <xml-element name="access-topology-id" type="java.lang.String"/> <xml-element name="access-node-id" type="java.lang.String"/> <xml-element name="access-ltp-id" type="java.lang.String"/> <xml-element name="cvlan" type="java.lang.String"/> <xml-element name="vpn-name" type="java.lang.String"/> </java-attributes> </java-type></pre> </div> <div data-bbox="987 905 1487 1665"> <p>Mockup API</p> <p>URL: https://<AAI host>:<AAI port>/aai/v14/business/customers/customer/{global-customer-id}/service-subscriptions/service-subscription/{service-type}/service-instances/service-instance/{service-instance-id}/allotted-resources/allotted-resource/{id}</p> <p>Method: PUT</p> <p>Request Body:</p> <pre>{ "allotted-resource-name": "some name", "access-provider-id": "provider id", "access-client-id": "client id", "access-topology-id": "topology id", "access-node-id": "node id", "access-ltp-id": "ltp id", "cvlan": "some tag", "vpn-name": "some name" }</pre> </div>
AAI-1353-7	<p>LAN port config</p> <p>Notes:</p> <p>See Figure 3 above.</p> <p>Proposal for specific new class of "lan-port-config" objects.</p>	<p>aai_schema_v13.xsd</p> <ul style="list-style-type: none"> "service-instances" 	<p>new element "lan-port-config" and new element "lan-port-configs":</p>

Mockup Schema (OXM)

```
<java-type name="LanPortConfig">
  <xml-root-element name="lan-port-
config"/>
  <java-attributes>
    <xml-element name="lan-port-config-
id" type="java.lang.String"/>
    <xml-element name="lan-port-config-
name" type="java.lang.String"/>
    <xml-element name="description"
type="java.lang.String"/>
    <xml-element name="device-id" type="
java.lang.String"/>
    <xml-element name="port-id" type="
java.lang.String"/>
    <xml-element name="ip-address" type="
java.lang.String"/>
    <xml-element name="vlan-tag" type="
java.lang.String"/>
    <xml-element name="input-bandwidth"
type="java.lang.String"/>
    <xml-element name="output-bandwidth"
type="java.lang.String"/>
    <xml-element name="dhcp-services"
type="inventory.aai.onap.org.v14.
DhcpServices"/>
    <xml-element name="relationship-
list"
type="inventory.aai.onap.org.v14.
RelationshipList"/>
  </java-attributes>
</java-type>

<java-type name="LanPortConfigs">
  <xml-root-element name="lan-port-
configs"/>
  <java-attributes>
    <xml-element name="lan-port-config"
container-type="java.lang.ArrayList"
type="inventory.aai.onap.org.v14.
LanPortConfigs"/>
  </java-attributes>
</java-type>
```

Mockup API

URL: https://<AAI host>:<AAI port>/aai/vl4/network/lan-port-configs/lan-port-config/id

Method: PUT

Request Body:

```
{
  "lan-port-config-id": "id",
  "lan-port-config-name": "some name",
  "description": "some description",
  "device-id": "some device",
  "port-id": "some port",
  "ip-address": "some address",
  "vlan-tag": "some tag",
  "input-bandwidth": "some input",
  "output-bandwidth": "some output",
  "dhcp-services": {
    "dhcp-service": [
      {
        "service-enable": "some enable",
        "dhcp-service-type": "some service",
        "lease-time": "some time",
        "domain-name": "some domain",
        "dns": "some dns",
        "ntp-primary": "some ntp",
        "ntp-secondary": "some secondary",
        "nbns": "some nbns",
        "server-ip-address": "some server"
      }
    ],
    "relationship-list": {
      "relationship": [
        {
          "related-to": "service-instance",
          "related-link": "url of service-instance",
          "relationship-data": [
            {
              "relationship-key": "service-instance.service-instance-id",
              "relationship-value": "some id"
            }
          ]
        }
      ]
    }
  }
}
```

AAI-1353-7b	<p>dhcp-service</p>	<p>new element "dhcp-service" and new element "dhcp-services", as sub-component of "lan-port-config":</p> <div data-bbox="987 197 1479 1318"> <p>Mockup Schema (OXM)</p> <pre> <java-type name="DhcpService"> <xml-root-element name="dhcp-service" /> <java-attributes> <xml-element name="service-enable" type="java.lang.String" /> <xml-element name="dhcp-service- type" type="java.lang.String" /> <xml-element name="lease-time" type=" java.lang.String" /> <xml-element name="domain-name" type="java.lang.String" /> <xml-element name="dns" type="java. lang.String" /> <xml-element name="ntp-primary" type="java.lang.String" /> <xml-element name="ntp-secondary" type="java.lang.String" /> <xml-element name="nbns" type="java. lang.String" /> <xml-element name="server-ip- address" type="java.lang.String" /> <xml-element name="relationship- list" type="inventory.aai.onap.org.v14. RelationshipList" /> </java-attributes> </java-type> <java-type name="DhcpServices"> <xml-root-element name="dhcp-services" /> <java-attributes> <xml-element name="dhcp-service" container-type="java.lang.ArrayList" type="inventory.aai.onap.org.v14. DhcpService" /> </java-attributes> </java-type> </pre> </div>
AAI-1353-8	<p>site-resource</p> <p>Notes:</p> <p>See Figure 3 above.</p>	<p>new element "site-resource" and new element "site-resources":</p>

Mockup Schema (OXM)

```
<java-type name="SiteResource">
  <xml-root-element name="site-resource"
  />
  <java-attributes>
    <xml-element name="site-resource-id"
type="java.lang.String" />
    <xml-element name="site-resource-
name" type="java.lang.String" />
    <xml-element name="description"
type="java.lang.String" />
    <xml-element name="type" type="java.
lang.String" />
    <xml-element name="role" type="java.
lang.String" />
    <xml-element name="generated-site-
id" type="java.lang.String" />
    <xml-element name="selflink" type="
java.lang.String" />
    <xml-element name="operational-
status" type="java.lang.String" />
    <xml-element name="model-
customization-id" type="java.lang.
String" />
    <xml-element name="model-version-id"
type="java.lang.String" />
    <xml-element name="model-invariant-
id" type="java.lang.String" />
    <xml-element name="relationship-
list"
      type="inventory.aai.onap.org.v14.
RelationshipList" />
  </java-attributes>
</java-type>

<java-type name="SiteResources">
  <xml-root-element name="site-
resources" />
  <java-attributes>
    <xml-element name="site-resource"
container-type="java.lang.ArrayList"
      type="inventory.aai.onap.org.v14.
SiteResource" />
  </java-attributes>
</java-type>
```

			<div>Mockup API</div> <div> URL: https://<AAI host>:<AAI port>/aai/v14/network/site-resources/site-resource/{id} Method: PUT Request Body: <pre>{ "site-resource-id": "{id}", "site-resource-name": "some name", "description": "some description", "type": "some type", "role": "some role", "generated-site-id": "some id", "selflink": "some URL", "operational-status": "some status", "model-customization-id": "some customization", "model-version-id": "some version", "model-invariant-id": "some invariant", "relationship-list": { "relationship": [{ "related-to": "service-instance", "related-link": "url of service-instance", "relationship-data": ["relationship-key": "service-instance.service-instance-id", "relationship-value": "some id"] }, { "related-to": "complex", "related-link": "url of complex", "relationship-data": ["relationship-key": "complex.physical-location-id", "relationship-value": "some id"] }] } }</pre> </div>
AAI-1353-9	physical location Notes: See Figure 3 above.	aai_schema_v13.xsd <ul style="list-style-type: none"> "complex" 	use existing element "complex" to represent "physical location".
AAI-1353-10	topo-network Notes: See Figure 4 above. Proposal for specific new class of "network-resource" objects.	aai_schema_v13.xsd	new element "network-resource" and new element "network-resources".

- "pnfs"
- "p-interfaces"
- "vpn-bindings"

Mockup Schema (OXM)

```
<java-type name="networkResource">
  <xml-root-element name="network-
resource"/>
  <java-attributes>
    <xml-element name="network-id" type="
java.lang.String"/>
    <xml-element name="provider-id"
type="java.lang.String"/>
    <xml-element name="client-id" type="
java.lang.String"/>
    <xml-element name="te-topo-id" type="
java.lang.String"/>
    <xml-element name="selflink" type="
java.lang.String"/>
    <xml-element name="pnfs"
type="inventory.aai.onap.org.v14.
Pnfs"/>
    <xml-element name="relationship-
list"
type="inventory.aai.onap.org.v14.
RelationshipList"/>
  </java-attributes>
</java-type>

<java-type name="networkResources">
  <xml-root-element name="network-
resources"/>
  <java-attributes>
    <xml-element name="network-resource"
container-type="java.lang.ArrayList"
type="inventory.aai.onap.org.v14.
NetworkResource"/>
  </java-attributes>
</java-type>
```

Mockup API

URL: https://<AAI host>:<AAI port>/aai/v14/network/network-resources/network-resource/{networkId}

Method: PUT

Request Body:

```
{
  "network-id": "{networkId}",
  "provider-id": "some provider",
  "client-id": "some client",
  "te-topo-id": "some topo",
  "selflink": "some URL",
  "pnfs": {
    "pnf" : [
      {
        "pnf-name": "name 1"
      },
      {
        "pnf-name": "name 2"
      }
    ]
  },
  "relationship-list": {
    "relationship" : [
      {
        "related-to": "vpn-binding",
        "related-link": "url of vpn-binding",
        "relationship-data": [
          {
            "relationship-key": "vpn-binding.vpn-id",
            "relationship-value": "some id"
          }
        ]
      }
    ]
  }
}
```

AAI-1353-11	<p>termination-point</p> <p>Notes:</p> <p>See Figure 4 above.</p> <p>Update existing class of objects.</p>	<p>aai_schema_v13.xsd</p> <ul style="list-style-type: none"> • "p-interface" • "vpn-bindings" 	<p>add properties to existing "p-interface" object:</p> <div data-bbox="987 178 1484 703"> <p>Mockup Schema (OXM)</p> <pre><java-type name="PInterface"> <xml-root-element name="p-interface"/> <java-attributes> <xml-element name="network-ref" type="java.lang.String"/> <xml-element name="transparent" type="java.lang.String"/> <xml-element name="operational-status" type="java.lang.String"/> <xml-element name="relationship-list" type="inventory.aai.onap.org.v14.RelationshipList"/> </java-attributes> </java-type></pre> </div> <div data-bbox="987 724 1484 1585"> <p>Mockup API</p> <p>URL: https://<AAI host>:<AAI port>/aai/v14/network/pnfs/pnf/{pnfName}/p-interfaces/p-interface/{tp-id}</p> <p>Method: PUT</p> <p>Request Body:</p> <pre>{ "interface-name": "{tp-id}", "network-ref": "some network", "transparent": "some value", "operational-status": "some oper", "speed-value": "eth bandwidth", "relationship-list": { "relationship" : [{ "related-to": "vpn-binding", "related-link": "url of vpn-binding", "relationship-data": ["relationship-key": "vpn-binding.vpn-id", "relationship-value": "some id"] }] } }</pre> </div>
AAI-1353-12	<p>cross-domain link</p> <p>Notes:</p> <p>See Figures 5, 6, 7, 8 and 9 above.</p> <p>Record information in AAI that crosses between ONAP Domain 1 and ONAP Domain 2</p>		<p>new proposed elements "external-aai-list" and "external-aai":</p>

Mockup Schema (OXM)

```
<java-type name="ExtAaiNetworks">
  <xml-root-element name="ext-aai-networks" />
  <java-attributes>
    <xml-element name="ext-aai-network"
      type="inventory.aai.onap.org.v14.ExtAaiNetwork" />
  </java-attributes>
</java-type>

<java-type name="ExtAaiNetwork">
  <xml-root-element name="ext-aai-network" />
  <java-attributes>
    <xml-element name="aai-id" type="java.lang.String"
      required="true" xml-key="true">
      <xml-element name="schema-version"
        type="java.lang.String">
        <xml-element name="esr-system-info"
          type="inventory.aai.onap.org.v14.EsrSystemInfo" />
        <xml-element name="logical-links"
          type="inventory.aai.onap.org.v14.LogicalLinks" />
        <xml-element name="vpn-bindings"
          type="inventory.aai.onap.org.v14.VpnBindings" />
        <xml-element name="pnfs"
          type="inventory.aai.onap.org.v14.Pnfs" />

        <xml-element name="connectivities"
          type="inventory.aai.onap.org.v14.Connectivities" />
        <xml-element name="lan-port-configs"
          type="inventory.aai.onap.org.v14.LanPortConfigs" />
        <xml-element name="network-resources"
          type="inventory.aai.onap.org.v14.NetworkResources" />
        <xml-element name="site-resources"
          type="inventory.aai.onap.org.v14.SiteResources" />
        <xml-element name="sdwan-vpns"
          type="inventory.aai.onap.org.v14.SdwanVpns" />
        <xml-element name="devices"
          type="inventory.aai.onap.org.v14.Devices" />
        <xml-element name="wan-port-configs"
          type="inventory.aai.onap.org.v14.WanPortConfigs" />
      </java-attributes>
    </xml-element>
  </java-attributes>
</java-type>
```

			<div><div>Mockup API</div><div><div>URL: https://<AAI host>:<AAI port>/aai/v14/network/ext-aai-networks/ext-aai-network/{aaiId}/p-interfaces/p-interface/{tp-id}</div><div>Method: PUT</div><div>Request Body:<div><div>{</div><div><div>"aai-id-name": "{aaiId}",</div><div>"schema-version": "some version",</div><div>"esr-system-info": {</div><div><div>"esr-system-info-id": "some id",</div><div>"system-name": "some name"</div></div></div></div><div>}</div></div></div></div>
AAI-1353-13	<div>SDWAN VPN</div> <div>Notes:</div> <div>See Figure 10 above.</div> <div>Proposal for specific new class of "sdwan-vpn" objects.</div>	<div>aai_schema_v13.xsd</div> <div><ul style="list-style-type: none">"service - instance"</div>	<div>new element "sdwan-vpn" and new element "sdwan-vpns":</div>

Mockup Schema (OXM)

```
<java-type name="SdwanVpn">
  <xml-root-element name="sdwan-vpn"/>
  <java-attributes>
    <xml-element name="sdwan-vpn-id"
type="java.lang.String"/>
    <xml-element name="sdwan-vpn-name"
type="java.lang.String"/>
    <xml-element name="vxlan-id" type="
java.lang.String"/>
    <xml-element name="topology" type="
java.lang.String"/>
    <xml-element name="tenant-id" type="
java.lang.String"/>
    <xml-element name="vpn-id" type="
java.lang.String"/>
    <xml-element name="selflink" type="
java.lang.String"/>
    <xml-element name="operational-
status" type="java.lang.String"/>
    <xml-element name="model-
customization-id" type="java.lang.
String"/>
    <xml-element name="model-version-id"
type="java.lang.String"/>
    <xml-element name="model-invariant-
id" type="java.lang.String"/>
    <xml-element name="relationship-
list"
      type="inventory.aai.onap.org.v14.
RelationshipList"/>
  </java-attributes>
</java-type>

<java-type name="SdwanVpns">
  <xml-root-element name="sdwan-vpns"/>
  <java-attributes>
    <xml-element name="sdwan-vpn"
container-type="java.lang.ArrayList"
      type="inventory.aai.onap.org.v14.
SdwanVpn"/>
  </java-attributes>
</java-type>
```

		<div><div>Mockup API</div><div>URL: https://<AAI host>:<AAI port>/aai/vl4/network/sdwan-vpns/sdwan-vpn/{id} Method: PUT Request Body: { "sdwan-vpn-id": "{id}", "sdwan-vpn-name": "a name", "vxlan-id": "an id", "topology": "topology value", "tenant-id": "tenant value", "vpn-id": "vpn value", "selflink": "some URL", "operational-status": "some status", "model-customization-id": "some customization", "model-version-id": "some version", "model-invariant-id": "some invariant", "relationship-list": { "relationship": [{ "related-to": "service-instance", "related-link": "url of service-instance", "relationship-data": [{ "relationship-key": "service-instance.service-instance-id", "relationship-value": "some id" }] }] } }</div></div>
AAI-1353-14	<div>SDWAN Device</div> <div>Notes:</div> <div>Proposal for specific new class of "device" objects.</div>	<div>new element "device" and new element "devices":</div>

Mockup Schema (OXM)

```
<java-type name="Device">
  <xml-root-element name="device"/>
  <java-attributes>
    <xml-element name="device-id" type="
java.lang.String"/>
    <xml-element name="esn" type="java.
lang.String"/>
    <xml-element name="device-name"
type="java.lang.String"/>
    <xml-element name="description"
type="java.lang.String"/>
    <xml-element name="vendor" type="
java.lang.String"/>
    <xml-element name="class" type="java.
lang.String"/>
    <xml-element name="type" type="java.
lang.String"/>
    <xml-element name="version" type="
java.lang.String"/>
    <xml-element name="system-ip" type="
java.lang.String"/>
    <xml-element name="selflink" type="
java.lang.String"/>
    <xml-element name="operational-
status" type="java.lang.String"/>
    <xml-element name="model-
customization-id" type="java.lang.
String"/>
    <xml-element name="model-version-id"
type="java.lang.String"/>
    <xml-element name="model-invariant-
id" type="java.lang.String"/>
    <xml-element name="relationship-
list"
      type="inventory.aai.onap.org.v14.
RelationshipList"/>
  </java-attributes>
</java-type>

<java-type name="Devices">
  <xml-root-element name="devices"/>
  <java-attributes>
    <xml-element name="device" container-
type="java.lang.ArrayList"
      type="inventory.aai.onap.org.v14.
Device"/>
  </java-attributes>
</java-type>
```


		<div><div>Mockup API</div><div>URL: https://<AAI host>:<AAI port>/aai/vl4/network/devices/device/{id} Method: PUT Request Body: { "device-id": "{id}", "esn": "an esn", "device-name": "a name", "description": "a description", "vendor": "vendor value", "class": "a class", "type": "a type", "version": "version value", "system-ip": "ip value", "selflink": "some URL", "operational-status": "some status", "model-customization-id": "some customization", "model-version-id": "some version", "model-invariant-id": "some invariant", "relationship-list": { "relationship" : [{ "related-to": "service-instance", "related-link": "url of service-instance", "relationship-data": ["relationship-key": "service-instance.service-instance-id", "relationship-value": "some id"] }] } }</div></div>
AAI-1353-15	<div>SDWAN Port</div> <div>Notes:</div> <div>Proposal for specific new class of "wan-port-config" objects.</div>	<div>new element "wan-port-config" and new element "wan-port-configs":</div>

Mockup Schema (OXM)

```
<java-type name="WanPortConfig">
  <xml-root-element name="wan-port-
config"/>
  <java-attributes>
    <xml-element name="wan-port-config-
id" type="java.lang.String"/>
    <xml-element name="wan-port-config-
name" type="java.lang.String"/>
    <xml-element name="device-id" type="
java.lang.String"/>
    <xml-element name="vlan-id" type="
java.lang.String"/>
    <xml-element name="ip-address" type="
java.lang.String"/>
    <xml-element name="provider-ip-
address" type="java.lang.String"/>
    <xml-element name="input-bandwidth"
type="java.lang.String"/>
    <xml-element name="output-bandwidth"
type="java.lang.String"/>
    <xml-element name="description"
type="java.lang.String"/>
    <xml-element name="port-type" type="
java.lang.String"/>
    <xml-element name="port-number"
type="java.lang.String"/>
    <xml-element name="transport-network-
name" type="java.lang.String"/>
    <xml-element name="device-port-id"
type="java.lang.String"/>
    <xml-element name="wan-port-id"
type="java.lang.String"/>
    <xml-element name="selflink" type="
java.lang.String"/>
    <xml-element name="operational-
status" type="java.lang.String"/>
    <xml-element name="model-
customization-id" type="java.lang.
String"/>
    <xml-element name="model-version-id"
type="java.lang.String"/>
    <xml-element name="model-invariant-
id" type="java.lang.String"/>
    <xml-element name="relationship-
list"
      type="inventory.aai.onap.org.v14.
RelationshipList"/>
  </java-attributes>
</java-type>

<java-type name="WanPortConfigs">
  <xml-root-element name="wan-port-
configs"/>
  <java-attributes>
    <xml-element name="wan-port-config"
container-type="java.lang.ArrayList"
      type="inventory.aai.onap.org.v14.
WanPortConfig"/>
  </java-attributes>
</java-type>
```

Mockup API

URL: https://<AAI host>:<AAI port>/aai/v14/network/wan-port-configs/wan-port-config/{id}

Method: PUT

Request Body:

```
{
  "wan-port-config-id": "{id}",
  "wan-port-config-name": "a name",
  "device-id": "id value",
  "vlan-id": "vlan value",
  "ip-address": "ip value",
  "provider-ip-address": "provider ip value",
  "input-bandwidth": "bandwidth value",
  "output-bandwidth": "bandwidth value",
  "description": "a description",
  "port-type": "type value",
  "port-number": "number value",
  "transport-network-name": "name value",
  "device-port-id": "id value",
  "wan-port-id": "id value",
  "selflink": "some URL",
  "operational-status": "some status",
  "model-customization-id": "some customization",
  "model-version-id": "some version",
  "model-invariant-id": "some invariant",
  "relationship-list": {
    "relationship" : [
      {
        "related-to": "service-instance",
        "related-link": "url of service-instance",
        "relationship-data": [
          {
            "relationship-key": "service-instance.service-instance-id",
            "relationship-value": "some id"
          }
        ]
      }
    ]
  }
}
```

AAI-1353-16	pnf	<p>aai_schema_v13.xsd</p> <ul style="list-style-type: none">• "pnf"	<p>add properties to existing "pnf" object:</p> <div data-bbox="977 176 1485 730"><p>Mockup Schema (OXM)</p><pre><java-type name="Pnf"> <xml-root-element name="pnf"/> <java-attributes> <xml-element name="admin-status" type="java.lang.String"/> <xml-element name="operational- status" type="java.lang.String"/> <xml-element name="model- customization-id" type="java.lang. String"/> <xml-element name="model-version-id" type="java.lang.String"/> <xml-element name="model-invariant- id" type="java.lang.String"/> </java-attributes> </java-type></pre></div> <div data-bbox="977 749 1485 1276"><p>Mockup API</p><p>URL: https://<AAI host>:<AAI port>/aai/vl4/network/pnfs/pnf/{pnfName}</p><p>Method: PUT</p><p>Request Body:</p><pre>{ "interface-name": "{tp-id}", "admin-status": "some admin", "operational-status": "some status", "model-customization-id": "some customization", "model-version-id": "some version", "model-invariant-id": "some invariant", }</pre></div>
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