XML Examples for the Cisco FTD Device Package for ACI, 1.0.5

Introduction 2

Revised: November 13, 2019

Introduction

This document provides XML examples for the FTD features that are supported through the Application Policy Infrastructure Controller (APIC) northbound APIs. However, the document does not include a complete list of all the FTD feature options available for these services. To determine the options that the northbound APIs allow, you should use the *device_specification.xml* file that is provided with the FTD device package.

For information about how to use the APIC northbound APIs, see the *Cisco APIC Management Information Model Reference*.

Interfaces

Interfaces are typically set up as part of the overall infrastructure on the APIC using a service graph. The graphs are associated with contracts, concrete devices, logical devices, and logical interfaces. The graphs also require the interface IP addresses to be in an appropriate range previously defined for the associated tenant. The graph setups show the various interface types. For a vFTD device, interfaces are defined on the FTD device itself using the physical interfaces. For a hardware FTD device, interfaces are defined using VLANs. The XML files to define the interfaces are the same, and the device package uses the “devtype” field (PHYSICAL or VIRTUAL) to determine the correct commands to send to the FTD device for configuration. The “funcType” field (GoTo or GoThrough) determines whether the interfaces are for a transparent or routed firewall.

Transparent Mode

```
<?xml version="1.0" encoding="UTF-8"?>
<imdata totalCount="1">
<fvTenant descr="" dn="uni/tn-ftd-t" name="ftd-t" nameAlias="" ownerKey="" ownerTag="">
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scope="tenant" targetDscp="unspecified">
<vzSubj consMatchT="AtleastOne" descr="" name="Subject" nameAlias="" prio="unspecified" provMatchT="AtleastOne"
 revFltPorts="yes" targetDscp="unspecified">
<vzRsSubjGraphAtt directives="" tnVnsAbsGraphName="transWebGraph" />
<vzRsSubjFiltAtt directives="" tnVzFilterName="default" />
</vzSubj>
</vzBrCP>
<drawCont>
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<drawInst
info="{'{fvAp/epg}-{web}':{'x':65,'y':332.00000000000006},'{fvAp/epg}-{app}':{'x':185,'y':332.00000000000006},'{fvAp/contract}-{trans-web-app-contract}':{'x':272,'y':10}}"
 oDn="uni/tn-ftd-t/ap-trans-prof" />
</drawCont>
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 prefGrMemb="exclude" prio="unspecified">
<fvRsDomAtt classPref="encap" delimiter="" encap="unknown" encapMode="auto" instrImedcy="lazy"
netflowPref="disabled" primaryEncap="unknown" resImedcy="lazy" tDn="uni/vmmp-VMware/dom-SJvmDomain-trans" />
<fvRsCons prio="unspecified" tnVzBrCPName="trans-web-app-contract" />
<fvRsCustQosPol tnQosCustomPolName="" />
<fvRsBd tnFvBDName="web" />
</fvAEPg>
<fvAEPg descr="" fwdCtrl="" isAttrBasedEPg="no" matchT="AtleastOne" name="app" nameAlias="" pcEnfPref="unenforced"
 prefGrMemb="exclude" prio="unspecified">
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nodeNameOrLbl="FWT" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="ifname" locked="no" mandatory="no" name="ifname" nameAlias=""
validation="" value="Provider" />
<vnsParamInst cardinality="unspecified" key="enabled" locked="no" mandatory="no" name="enabled" nameAlias=""
```

```
validation="" value="true" />
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="int_security_zone" locked="no" name="int_security_zone" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
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nameAlias="" targetName="ProvSZSW" />
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</vnsFolderInst>
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graphNameOrLbl="transWebGraph" key="InterfaceConfig" locked="no" name="externalInterface" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
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validation="" value="true" />
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="int_security_zone" locked="no" name="int_security_zone" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="security_zone" locked="no" mandatory="no" name="security_zone"
nameAlias="" targetName="ConsSZSW" />
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</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="AccessPolicy" locked="no" name="ACIAccPolicyTransparent" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="AccessRule" locked="no" name="ACIAccRule" nameAlias="" nodeNameOrLbl="FWT"
 scopedBy="epg">
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nameAlias="" validation="" value="true" />
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graphNameOrLbl="transWebGraph" key="AccDestinationZones" locked="no" name="AccDestinationZones" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
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</vnsFolderInst>
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graphNameOrLbl="transWebGraph" key="AccSourceZones" locked="no" name="AccSourceZones" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="SourceZones" locked="no" mandatory="no" name="SourceZone"
nameAlias="" targetName="externalInterface/int_security_zone" />
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</vnsFolderInst>
</vnsFolderInst>
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graphNameOrLbl="transWebGraph" key="AccessPolicyFolder" locked="no" name="AccessPolicyFolder" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
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name="InAccessPolicyRel" nameAlias="" targetName="ACIAccPolicyTransparent" />
</vnsFolderInst>
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graphNameOrLbl="transWebGraph" key="ExIntfConfigRelFolder" locked="no" name="ExtConfig" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
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 nameAlias="" targetName="externalInterface" />
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<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="BridgeInterfaceFolder" locked="no" name="BridgeInterfaceFolder" nameAlias=""
 nodeNameOrLbl="FWT" scopedBy="epg">
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name="InBridgeGroupInterfaceRel" nameAlias="" targetName="BVI1" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="SecurityZone" locked="no" name="ProvSZSW" nameAlias="" nodeNameOrLbl="FWT"
```

```
 scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="type" locked="no" mandatory="no" name="type" nameAlias=""
validation="" value="SWITCHED" />
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graphNameOrLbl="transWebGraph" key="SecurityZone" locked="no" name="ConsSZSW" nameAlias="" nodeNameOrLbl="FWT"
 scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="type" locked="no" mandatory="no" name="type" nameAlias=""
validation="" value="SWITCHED" />
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graphNameOrLbl="transWebGraph" key="BridgeGroupInterface" locked="no" name="BVI1" nameAlias="" nodeNameOrLbl="FWT"
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 nameAlias="" validation="" value="1" />
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graphNameOrLbl="transWebGraph" key="IPv4Config" locked="no" name="IPv4Config" nameAlias="" nodeNameOrLbl="FWT"
 scopedBy="epg">
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="static" locked="no" name="static" nameAlias="" nodeNameOrLbl="FWT"
scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="address" locked="no" mandatory="no" name="address" nameAlias=""
validation="" value="70.0.0.1/24" />
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</vnsFolderInst>
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graphNameOrLbl="transWebGraph" key="Interfaces" locked="no" name="Interfaces" nameAlias="" nodeNameOrLbl="FWT"
 scopedBy="epg">
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="Interface" locked="no" name="InternalInterface" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="InterfaceHolder" locked="no" mandatory="no" name="InterfaceHolder"
 nameAlias="" targetName="internalInterface" />
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<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="Interface" locked="no" name="ExternalInterface" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
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<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="trans-web-app-contract" devCtxLbl=""
graphNameOrLbl="transWebGraph" key="InIntfConfigRelFolder" locked="no" name="IntConfig" nameAlias=""
nodeNameOrLbl="FWT" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="InIntfConfigRel" locked="no" mandatory="no" name="InConfigrel"
nameAlias="" targetName="internalInterface" />
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<fvRsProv matchT="AtleastOne" prio="unspecified" tnVzBrCPName="trans-web-app-contract" />
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netflowPref="disabled" primaryEncap="unknown" resImedcy="lazy" tDn="uni/vmmp-VMware/dom-SJvmDomain-trans" />
<fvRsCustQosPol tnQosCustomPolName="" />
<fvRsBd tnFvBDName="app" />
</fvAEPg>
</fvAp>
<fvRsTenantMonPol tnMonEPGPolName="" />
<vnsAbsGraph descr="" name="transWebGraph" nameAlias="" ownerKey="" ownerTag="" uiTemplateType="UNSPECIFIED">
<vnsAbsTermNodeProv descr="" name="T2" nameAlias="" ownerKey="" ownerTag="">
<vnsOutTerm descr="" name="" nameAlias="" />
<vnsInTerm descr="" name="" nameAlias="" />
<vnsAbsTermConn attNotify="no" descr="" name="1" nameAlias="" ownerKey="" ownerTag="" />
</vnsAbsTermNodeProv>
<vnsAbsTermNodeCon descr="" name="T1" nameAlias="" ownerKey="" ownerTag="">
<vnsOutTerm descr="" name="" nameAlias="" />
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<vnsInTerm descr="" name="" nameAlias="" />
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</vnsAbsTermNodeCon>
<vnsAbsNode descr="" funcTemplateType="FW_TRANS" funcType="GoThrough" isCopy="no" managed="yes" name="FWT"
nameAlias="" ownerKey="" ownerTag="" routingMode="unspecified" sequenceNumber="0" shareEncap="no">
<vnsRsNodeToMFunc tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD" />
<vnsRsNodeToLDev tDn="uni/tn-ftd-t/lDevVip-FTD-T" />
<vnsRsNodeToAbsFuncProf
tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/absFuncProfContr/absFuncProfGrp-FTDProfiles/absFuncProf-TransparentModeForFTD"
 />
<vnsAbsFuncConn attNotify="no" descr="" name="consumer" nameAlias="" ownerKey="" ownerTag="">
<vnsRsMConnAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD/mConn-external" />
</vnsAbsFuncConn>
<vnsAbsFuncConn attNotify="no" descr="" name="provider" nameAlias="" ownerKey="" ownerTag="">
<vnsRsMConnAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD/mConn-internal" />
</vnsAbsFuncConn>
</vnsAbsNode>
<vnsAbsConnection adjType="L2" connDir="provider" connType="external" descr="" directConnect="no" name="C1"
nameAlias="" ownerKey="" ownerTag="" unicastRoute="yes">
<vnsRsAbsConnectionConns tDn="uni/tn-ftd-t/AbsGraph-transWebGraph/AbsNode-FWT/AbsFConn-consumer" />
<vnsRsAbsConnectionConns tDn="uni/tn-ftd-t/AbsGraph-transWebGraph/AbsTermNodeCon-T1/AbsTConn" />
</vnsAbsConnection>
<vnsAbsConnection adjType="L2" connDir="provider" connType="external" descr="" directConnect="no" name="C2"
nameAlias="" ownerKey="" ownerTag="" unicastRoute="yes">
<vnsRsAbsConnectionConns tDn="uni/tn-ftd-t/AbsGraph-transWebGraph/AbsNode-FWT/AbsFConn-provider" />
<vnsRsAbsConnectionConns tDn="uni/tn-ftd-t/AbsGraph-transWebGraph/AbsTermNodeProv-T2/AbsTConn" />
</vnsAbsConnection>
</vnsAbsGraph>
<fvBD arpFlood="yes" descr="" epClear="no" epMoveDetectMode="" ipLearning="yes" limitIpLearnToSubnets="no"
llAddr="::" mac="00:22:BD:F8:19:FF" mcastAllow="no" multiDstPktAct="bd-flood" name="web" nameAlias="" ownerKey=""
 ownerTag="" type="regular" unicastRoute="no" unkMacUcastAct="flood" unkMcastAct="flood" vmac="not-applicable">
<igmpIfP descr="" name="" nameAlias="" />
<fvRsIgmpsn tnIgmpSnoopPolName="" />
<fvRsCtx tnFvCtxName="trans-ctx" />
<fvRsBdToEpRet resolveAct="resolve" tnFvEpRetPolName="" />
<fvRsBDToNdP tnNdIfPolName="" />
</fvBD>
<fvBD arpFlood="yes" descr="" epClear="no" epMoveDetectMode="" ipLearning="yes" limitIpLearnToSubnets="no"
llAddr="::" mac="00:22:BD:F8:19:FF" mcastAllow="no" multiDstPktAct="bd-flood" name="app" nameAlias="" ownerKey=""
 ownerTag="" type="regular" unicastRoute="no" unkMacUcastAct="flood" unkMcastAct="flood" vmac="not-applicable">
<igmpIfP descr="" name="" nameAlias="" />
<fvRsIgmpsn tnIgmpSnoopPolName="" />
<fvRsCtx tnFvCtxName="trans-ctx" />
<fvRsBdToEpRet resolveAct="resolve" tnFvEpRetPolName="" />
<fvRsBDToNdP tnNdIfPolName="" />
</fvBD>
<fvCtx descr="" knwMcastAct="permit" name="trans-ctx" nameAlias="" ownerKey="" ownerTag="" pcEnfDir="ingress"
 pcEnfPref="enforced">
<vzAny descr="" matchT="AtleastOne" name="" nameAlias="" prefGrMemb="disabled" />
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<fvRsCtxToEpRet tnFvEpRetPolName="" />
<fvRsCtxToExtRouteTagPol tnL3extRouteTagPolName="" />
<fvRsBgpCtxPol tnBgpCtxPolName="" />
</fvCtx>
<vnsDevMgr descr="" name="ftd-trans-dev-mgr" nameAlias="" ownerKey="" ownerTag="">
<vnsRsDevMgrToMDevMgr tDn="uni/infra/mDevMgr-CISCO-FTDmgr_FI-1.0" />
<vnsCMgmts host="192.168.200.27" name="" nameAlias="" port="443" />
<vnsCCredSecret name="password" nameAlias="" />
<vnsCCred name="username" nameAlias="" value="admin" />
</vnsDevMgr>
<vnsLDevVip contextAware="single-Context" devtype="VIRTUAL" funcType="GoThrough" isCopy="no" managed="yes"
mode="legacy-Mode" name="FTD-T" nameAlias="" packageModel="VIRTUAL" svcType="FW" trunking="no">
<vnsLIf encap="unknown" name="internal" nameAlias="">
<vnsRsMetaIf isConAndProv="no" tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mIfLbl-internal" />
```

```
<vnsRsCIfAttN tDn="uni/tn-ftd-t/lDevVip-FTD-T/cDev-Device1/cIf-[GigabitEthernet0/1]" />
</vnsLIf>
<vnsLIf encap="unknown" name="external" nameAlias="">
<vnsRsMetaIf isConAndProv="no" tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mIfLbl-external" />
<vnsRsCIfAttN tDn="uni/tn-ftd-t/lDevVip-FTD-T/cDev-Device1/cIf-[GigabitEthernet0/0]" />
</vnsLIf>
<vnsRsALDevToDomP tDn="uni/vmmp-VMware/dom-SJvmDomain-trans" />
<vnsCMgmt host="192.168.200.28" name="" nameAlias="" port="443" />
<vnsRsALDevToDevMgr tnVnsDevMgrName="ftd-trans-dev-mgr" />
<vnsCDev devCtxLbl="" name="Device1" nameAlias="" vcenterName="SJvmController-trans" vmName="Cisco
vFTD-Transparent">
<vnsRsCDevToCtrlrP tDn="uni/vmmp-VMware/dom-SJvmDomain-trans/ctrlr-SJvmController-trans" />
<vnsCMgmt host="192.168.200.28" name="" nameAlias="" port="443" />
<vnsCIf name="GigabitEthernet0/1" nameAlias="" vnicName="Network adapter 3" />
<vnsCIf name="GigabitEthernet0/0" nameAlias="" vnicName="Network adapter 2" />
<vnsCCredSecret name="password" nameAlias="" />
<vnsCCred name="username" nameAlias="" value="admin" />
</vnsCDev>
<vnsCCredSecret name="password" nameAlias="" />
<vnsRsMDevAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0" />
<vnsCCred name="username" nameAlias="" value="admin" />
</vnsLDevVip>
<vnsLDevCtx context="" ctrctNameOrLbl="trans-web-app-contract" descr="" graphNameOrLbl="transWebGraph" name=""
 nameAlias="" nodeNameOrLbl="FWT">
<vnsRsLDevCtxToLDev tDn="uni/tn-ftd-t/lDevVip-FTD-T" />
<vnsLIfCtx connNameOrLbl="consumer" descr="" name="" nameAlias="" permitLog="no">
<vnsRsLIfCtxToLIf tDn="uni/tn-ftd-t/lDevVip-FTD-T/lIf-external" />
<vnsRsLIfCtxToBD tDn="uni/tn-ftd-t/BD-web" />
</vnsLIfCtx>
<vnsLIfCtx connNameOrLbl="provider" descr="" name="" nameAlias="" permitLog="no">
<vnsRsLIfCtxToLIf tDn="uni/tn-ftd-t/lDevVip-FTD-T/lIf-internal" />
<vnsRsLIfCtxToBD tDn="uni/tn-ftd-t/BD-app" />
</vnsLIfCtx>
</vnsLDevCtx>
<vnsSvcCont />
</fvTenant>
</imdata>
```

Routed Mode

```
<?xml version="1.0" encoding="UTF-8"?>
<imdata totalCount="1">
<fvTenant descr="" dn="uni/tn-ftd" name="ftd" nameAlias="" ownerKey="" ownerTag="">
<vzBrCP descr="" name="web-app-contract1" nameAlias="" ownerKey="" ownerTag="" prio="unspecified" scope="tenant"
 targetDscp="unspecified">
<vzSubj consMatchT="AtleastOne" descr="" name="Subject" nameAlias="" prio="unspecified" provMatchT="AtleastOne"
 revFltPorts="yes" targetDscp="unspecified">
<vzRsSubjGraphAtt directives="" tnVnsAbsGraphName="WebGraph" />
<vzRsSubjFiltAtt directives="" tnVzFilterName="default" />
</vzSubj>
</vzBrCP>
<drawCont>
<drawInst info="{'{fvNetworking/vrf}-{ctx}':{'x':443,'y':91}}" oDn="uni/tn-ftd" />
<drawInst
info="{'{fvAp/epg}-{web-epg}':{'x':65,'y':332.00000000000006},'{fvAp/epg}-{app-epg}':{'x':185,'y':332.00000000000006},'{fvAp/contract}-{web-app-contract1}':{'x':272,'y':10}}"
 oDn="uni/tn-ftd/ap-ftd-prof" />
</drawCont>
<fvAp descr="" name="ftd-prof" nameAlias="" ownerKey="" ownerTag="" prio="unspecified">
<fvAEPg descr="" fwdCtrl="" isAttrBasedEPg="no" matchT="AtleastOne" name="app-epg" nameAlias=""
pcEnfPref="unenforced" prefGrMemb="exclude" prio="unspecified">
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="InIntfConfigRelFolder" locked="no" name="IntConfig" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="InIntfConfigRel" locked="no" mandatory="no" name="InConfigrel"
nameAlias="" targetName="internalInterface" />
```

```
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="AccessPolicyFolder" locked="no" name="AccessPolicyFolder" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="InAccessPolicyRel" locked="no" mandatory="no"
name="InAccessPolicyRel" nameAlias="" targetName="ACIAccPolicyRouted" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="InterfaceConfig" locked="no" name="internalInterface" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="enabled" locked="no" mandatory="no" name="enabled" nameAlias=""
validation="" value="true" />
<vnsParamInst cardinality="unspecified" key="ifname" locked="no" mandatory="no" name="ifname" nameAlias=""
validation="" value="Consumer" />
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="int_security_zone" locked="no" name="int_security_zone" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="security_zone" locked="no" mandatory="no" name="security_zone"
nameAlias="" targetName="ProvSZRT" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="IPv4Config" locked="no" name="IPv4Config" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="static" locked="no" name="static" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="address" locked="no" mandatory="no" name="address" nameAlias=""
validation="" value="60.0.0.2/24" />
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</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="InterfaceConfig" locked="no" name="externalInterface" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="enabled" locked="no" mandatory="no" name="enabled" nameAlias=""
validation="" value="true" />
<vnsParamInst cardinality="unspecified" key="ifname" locked="no" mandatory="no" name="ifname" nameAlias=""
validation="" value="Provider" />
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="int_security_zone" locked="no" name="int_security_zone" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="security_zone" locked="no" mandatory="no" name="security_zone"
nameAlias="" targetName="ConsSZRT" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="IPv4Config" locked="no" name="IPv4Config" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="static" locked="no" name="static" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="address" locked="no" mandatory="no" name="address" nameAlias=""
validation="" value="50.0.0.2/24" />
</vnsFolderInst>
</vnsFolderInst>
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="AccessPolicy" locked="no" name="ACIAccPolicyRouted" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="AccessRule" locked="no" name="ACIAccRule" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="bidirectional" locked="no" mandatory="no" name="Bi-Directional"
nameAlias="" validation="" value="true" />
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="AccSourceZones" locked="no" name="AccSourceZones" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="SourceZones" locked="no" mandatory="no" name="SourceZone"
nameAlias="" targetName="externalInterface/int_security_zone" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="AccDestinationZones" locked="no" name="AccDestinationZones" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="DestinationZones" locked="no" mandatory="no" name="DestinationZone"
 nameAlias="" targetName="internalInterface/int_security_zone" />
</vnsFolderInst>
</vnsFolderInst>
</vnsFolderInst>
```

```
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="SecurityZone" locked="no" name="ConsSZRT" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="type" locked="no" mandatory="no" name="type" nameAlias=""
validation="" value="ROUTED" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="ExIntfConfigRelFolder" locked="no" name="ExtConfig" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="ExIntfConfigRel" locked="no" mandatory="no" name="ExtConfigrel"
 nameAlias="" targetName="externalInterface" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="web-app-contract1" devCtxLbl="" graphNameOrLbl="WebGraph"
 key="SecurityZone" locked="no" name="ProvSZRT" nameAlias="" nodeNameOrLbl="FW1" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="type" locked="no" mandatory="no" name="type" nameAlias=""
validation="" value="ROUTED" />
</vnsFolderInst>
<fvRsProv matchT="AtleastOne" prio="unspecified" tnVzBrCPName="web-app-contract1" />
<fvRsDomAtt classPref="encap" delimiter="" encap="unknown" encapMode="auto" instrImedcy="lazy"
netflowPref="disabled" primaryEncap="unknown" resImedcy="lazy" tDn="uni/vmmp-VMware/dom-SJvmDomain" />
<fvRsCustQosPol tnQosCustomPolName="" />
<fvRsBd tnFvBDName="app" />
</fvAEPg>
<fvAEPg descr="" fwdCtrl="" isAttrBasedEPg="no" matchT="AtleastOne" name="web-epg" nameAlias=""
pcEnfPref="unenforced" prefGrMemb="exclude" prio="unspecified">
<fvRsDomAtt classPref="encap" delimiter="" encap="unknown" encapMode="auto" instrImedcy="lazy"
netflowPref="disabled" primaryEncap="unknown" resImedcy="lazy" tDn="uni/vmmp-VMware/dom-SJvmDomain" />
<fvRsCons prio="unspecified" tnVzBrCPName="web-app-contract1" />
<fvRsCustQosPol tnQosCustomPolName="" />
<fvRsBd tnFvBDName="web" />
</fvAEPg>
</fvAp>
<fvRsTenantMonPol tnMonEPGPolName="" />
<vnsAbsGraph descr="" name="WebGraph" nameAlias="" ownerKey="" ownerTag="" uiTemplateType="UNSPECIFIED">
<vnsAbsTermNodeProv descr="" name="T2" nameAlias="" ownerKey="" ownerTag="">
<vnsOutTerm descr="" name="" nameAlias="" />
<vnsInTerm descr="" name="" nameAlias="" />
<vnsAbsTermConn attNotify="no" descr="" name="1" nameAlias="" ownerKey="" ownerTag="" />
</vnsAbsTermNodeProv>
<vnsAbsTermNodeCon descr="" name="T1" nameAlias="" ownerKey="" ownerTag="">
<vnsOutTerm descr="" name="" nameAlias="" />
<vnsInTerm descr="" name="" nameAlias="" />
<vnsAbsTermConn attNotify="no" descr="" name="1" nameAlias="" ownerKey="" ownerTag="" />
</vnsAbsTermNodeCon>
<vnsAbsNode descr="" funcTemplateType="FW_ROUTED" funcType="GoTo" isCopy="no" managed="yes" name="FW1"
nameAlias="" ownerKey="" ownerTag="" routingMode="unspecified" sequenceNumber="0" shareEncap="no">
<vnsRsNodeToMFunc tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD" />
<vnsRsNodeToLDev tDn="uni/tn-ftd/lDevVip-FTD-FW" />
<vnsRsNodeToAbsFuncProf
tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/absFuncProfContr/absFuncProfGrp-FTDProfiles/absFuncProf-RoutedModeForFTD"
 />
<vnsAbsFuncConn attNotify="no" descr="" name="provider" nameAlias="" ownerKey="" ownerTag="">
<vnsRsMConnAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD/mConn-internal" />
</vnsAbsFuncConn>
<vnsAbsFuncConn attNotify="no" descr="" name="consumer" nameAlias="" ownerKey="" ownerTag="">
<vnsRsMConnAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD/mConn-external" />
</vnsAbsFuncConn>
</vnsAbsNode>
<vnsAbsConnection adjType="L2" connDir="provider" connType="external" descr="" directConnect="no" name="C1"
nameAlias="" ownerKey="" ownerTag="" unicastRoute="yes">
<vnsRsAbsConnectionConns tDn="uni/tn-ftd/AbsGraph-WebGraph/AbsNode-FW1/AbsFConn-consumer" />
<vnsRsAbsConnectionConns tDn="uni/tn-ftd/AbsGraph-WebGraph/AbsTermNodeCon-T1/AbsTConn" />
</vnsAbsConnection>
<vnsAbsConnection adjType="L2" connDir="provider" connType="external" descr="" directConnect="no" name="C2"
nameAlias="" ownerKey="" ownerTag="" unicastRoute="yes">
<vnsRsAbsConnectionConns tDn="uni/tn-ftd/AbsGraph-WebGraph/AbsNode-FW1/AbsFConn-provider" />
```

```
<vnsRsAbsConnectionConns tDn="uni/tn-ftd/AbsGraph-WebGraph/AbsTermNodeProv-T2/AbsTConn" />
</vnsAbsConnection>
</vnsAbsGraph>
<fvBD arpFlood="yes" descr="" epClear="no" epMoveDetectMode="" ipLearning="yes" limitIpLearnToSubnets="no"
llAddr="::" mac="00:22:BD:F8:19:FF" mcastAllow="no" multiDstPktAct="bd-flood" name="app" nameAlias="" ownerKey=""
 ownerTag="" type="regular" unicastRoute="yes" unkMacUcastAct="flood" unkMcastAct="flood" vmac="not-applicable">
<igmpIfP descr="" name="" nameAlias="" />
<fvSubnet ctrl="" descr="" ip="60.0.0.1/24" name="" nameAlias="" preferred="no" scope="private" virtual="no"
/>
<fvRsIgmpsn tnIgmpSnoopPolName="" />
<fvRsCtx tnFvCtxName="ctx" />
<fvRsBdToEpRet resolveAct="resolve" tnFvEpRetPolName="" />
<fvRsBDToNdP tnNdIfPolName="" />
</fvBD>
<fvBD arpFlood="yes" descr="" epClear="no" epMoveDetectMode="" ipLearning="yes" limitIpLearnToSubnets="no"
llAddr="::" mac="00:22:BD:F8:19:FF" mcastAllow="no" multiDstPktAct="bd-flood" name="web" nameAlias="" ownerKey=""
 ownerTag="" type="regular" unicastRoute="yes" unkMacUcastAct="flood" unkMcastAct="flood" vmac="not-applicable">
<igmpIfP descr="" name="" nameAlias="" />
<fvSubnet ctrl="" descr="" ip="50.0.0.1/24" name="" nameAlias="" preferred="no" scope="private" virtual="no"
/>
<fvRsIgmpsn tnIgmpSnoopPolName="" />
<fvRsCtx tnFvCtxName="ctx" />
<fvRsBdToEpRet resolveAct="resolve" tnFvEpRetPolName="" />
<fvRsBDToNdP tnNdIfPolName="" />
</fvBD>
<fvCtx descr="" knwMcastAct="permit" name="ctx" nameAlias="" ownerKey="" ownerTag="" pcEnfDir="ingress"
pcEnfPref="enforced">
<vzAny descr="" matchT="AtleastOne" name="" nameAlias="" prefGrMemb="disabled" />
<fvRsOspfCtxPol tnOspfCtxPolName="" />
<fvRsCtxToEpRet tnFvEpRetPolName="" />
<fvRsCtxToExtRouteTagPol tnL3extRouteTagPolName="" />
<fvRsBgpCtxPol tnBgpCtxPolName="" />
</fvCtx>
<vnsDevMgr descr="" name="ftd-dev-manager" nameAlias="" ownerKey="" ownerTag="">
<vnsRsDevMgrToMDevMgr tDn="uni/infra/mDevMgr-CISCO-FTDmgr_FI-1.0" />
<vnsCMgmts host="192.168.200.27" name="" nameAlias="" port="443" />
<vnsCCredSecret name="password" nameAlias="" />
<vnsCCred name="username" nameAlias="" value="admin" />
</vnsDevMgr>
<vnsLDevVip contextAware="single-Context" devtype="VIRTUAL" funcType="GoTo" isCopy="no" managed="yes"
mode="legacy-Mode" name="FTD-FW" nameAlias="" packageModel="VIRTUAL" svcType="FW" trunking="no">
<vnsLIf encap="unknown" name="external" nameAlias="">
<vnsRsMetaIf isConAndProv="no" tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mIfLbl-external" />
<vnsRsCIfAttN tDn="uni/tn-ftd/lDevVip-FTD-FW/cDev-Device1/cIf-[GigabitEthernet0/0]" />
</vnsLIf>
<vnsLIf encap="unknown" name="internal" nameAlias="">
<vnsRsMetaIf isConAndProv="no" tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mIfLbl-internal" />
<vnsRsCIfAttN tDn="uni/tn-ftd/lDevVip-FTD-FW/cDev-Device1/cIf-[GigabitEthernet0/1]" />
</vnsLIf>
<vnsRsALDevToDomP tDn="uni/vmmp-VMware/dom-SJvmDomain" />
<vnsCMgmt host="192.168.200.29" name="" nameAlias="" port="443" />
<vnsRsALDevToDevMgr tnVnsDevMgrName="ftd-dev-manager" />
<vnsCDev devCtxLbl="" name="Device1" nameAlias="" vcenterName="SJvmController" vmName="Cisco vFTD2">
<vnsRsCDevToCtrlrP tDn="uni/vmmp-VMware/dom-SJvmDomain/ctrlr-SJvmController" />
<vnsCMgmt host="192.168.200.29" name="" nameAlias="" port="443" />
<vnsCIf name="GigabitEthernet0/0" nameAlias="" vnicName="Network adapter 2" />
<vnsCIf name="GigabitEthernet0/1" nameAlias="" vnicName="Network adapter 3" />
<vnsCCredSecret name="password" nameAlias="" />
<vnsCCred name="username" nameAlias="" value="admin" />
</vnsCDev>
<vnsCCredSecret name="password" nameAlias="" />
<vnsRsMDevAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0" />
<vnsCCred name="username" nameAlias="" value="admin" />
</vnsLDevVip>
```

```
<vnsLDevCtx context="" ctrctNameOrLbl="web-app-contract1" descr="" graphNameOrLbl="WebGraph" name="" nameAlias=""
 nodeNameOrLbl="FW1">
<vnsRsLDevCtxToLDev tDn="uni/tn-ftd/lDevVip-FTD-FW" />
<vnsLIfCtx connNameOrLbl="provider" descr="" name="" nameAlias="" permitLog="no">
<vnsRsLIfCtxToLIf tDn="uni/tn-ftd/lDevVip-FTD-FW/lIf-internal" />
<vnsRsLIfCtxToBD tDn="uni/tn-ftd/BD-app" />
</vnsLIfCtx>
<vnsLIfCtx connNameOrLbl="consumer" descr="" name="" nameAlias="" permitLog="no">
<vnsRsLIfCtxToLIf tDn="uni/tn-ftd/lDevVip-FTD-FW/lIf-external" />
<vnsRsLIfCtxToBD tDn="uni/tn-ftd/BD-web" />
</vnsLIfCtx>
</vnsLDevCtx>
<vnsSvcCont />
</fvTenant>
</imdata>
```

Inline Mode

```
<?xml version="1.0" encoding="UTF-8"?>
<imdata totalCount="1">
<fvTenant descr="" dn="uni/tn-ftd-inline" name="ftd-inline" nameAlias="" ownerKey="" ownerTag="">
<vzBrCP descr="" name="inline-contract1" nameAlias="" ownerKey="" ownerTag="" prio="unspecified" scope="tenant"
 targetDscp="unspecified">
<vzSubj consMatchT="AtleastOne" descr="" name="Subject" nameAlias="" prio="unspecified" provMatchT="AtleastOne"
 revFltPorts="yes" targetDscp="unspecified">
<vzRsSubjGraphAtt directives="" tnVnsAbsGraphName="inline-graph" />
<vzRsSubjFiltAtt directives="" tnVzFilterName="default" />
</vzSubj>
</vzBrCP>
<drawCont>
<drawInst
info="{'{fvAp/epg}-{web-epg}':{'x':65,'y':332.00000000000006},'{fvAp/epg}-{app-epg}':{'x':185,'y':332.00000000000006},'{fvAp/contract}-{inline-contract1}':{'x':272,'y':10}}"
 oDn="uni/tn-ftd-inline/ap-inline-app-prof" />
<drawInst info="{'{fvNetworking/vrf}-{ctx-inline}':{'x':428,'y':86}}" oDn="uni/tn-ftd-inline" />
</drawCont>
<fvAp descr="" name="inline-app-prof" nameAlias="" ownerKey="" ownerTag="" prio="unspecified">
<fvAEPg descr="" fwdCtrl="" isAttrBasedEPg="no" matchT="AtleastOne" name="web-epg" nameAlias=""
pcEnfPref="unenforced" prefGrMemb="exclude" prio="unspecified">
<fvRsDomAtt classPref="encap" delimiter="" encap="unknown" encapMode="auto" instrImedcy="lazy"
netflowPref="disabled" primaryEncap="unknown" resImedcy="lazy" tDn="uni/vmmp-VMware/dom-SJvmDomain" />
<fvRsCons prio="unspecified" tnVzBrCPName="inline-contract1" />
<fvRsCustQosPol tnQosCustomPolName="" />
<fvRsBd tnFvBDName="web-inline" />
</fvAEPg>
<fvAEPg descr="" fwdCtrl="" isAttrBasedEPg="no" matchT="AtleastOne" name="app-epg" nameAlias=""
pcEnfPref="unenforced" prefGrMemb="exclude" prio="unspecified">
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="SecurityZone" locked="no" name="ProvSZIN" nameAlias="" nodeNameOrLbl="FW"
scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="type" locked="no" mandatory="no" name="type" nameAlias=""
validation="" value="INLINE" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="InlineSet" locked="no" name="IPSSet" nameAlias="" nodeNameOrLbl="FW"
scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="mtu" locked="no" mandatory="no" name="mtu" nameAlias="" validation=""
 value="1518" />
<vnsParamInst cardinality="unspecified" key="failOpenSnortDown" locked="no" mandatory="no"
name="failOpenSnortDown" nameAlias="" validation="" value="true" />
<vnsParamInst cardinality="unspecified" key="failOpenSnortBusy" locked="no" mandatory="no"
name="failOpenSnortBusy" nameAlias="" validation="" value="false" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="ExIntfConfigRelFolder" locked="no" name="ExtConfig" nameAlias=""
```

```
nodeNameOrLbl="FW" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="ExIntfConfigRel" locked="no" mandatory="no" name="ExtConfigrel"
 nameAlias="" targetName="externalInterface" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="AccessPolicyFolder" locked="no" name="AccessPolicyFolder" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="InAccessPolicyRel" locked="no" mandatory="no"
name="InAccessPolicyRel" nameAlias="" targetName="ACIAccPolicyInline" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="InIntfConfigRelFolder" locked="no" name="IntConfig" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="InIntfConfigRel" locked="no" mandatory="no" name="InConfigrel"
nameAlias="" targetName="internalInterface" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="InterfaceConfig" locked="no" name="internalInterface" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="ifname" locked="no" mandatory="no" name="ifname" nameAlias=""
validation="" value="Provider" />
<vnsParamInst cardinality="unspecified" key="enabled" locked="no" mandatory="no" name="enabled" nameAlias=""
validation="" value="true" />
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="int_inline_set" locked="no" name="int_inline_set" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="inline_set" locked="no" mandatory="no" name="InlineSetRel"
nameAlias="" targetName="IPSSet" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="int_security_zone" locked="no" name="int_security_zone" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="security_zone" locked="no" mandatory="no" name="security_zone"
nameAlias="" targetName="ProvSZIN" />
</vnsFolderInst>
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="SecurityZone" locked="no" name="ConsSZIN" nameAlias="" nodeNameOrLbl="FW"
scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="type" locked="no" mandatory="no" name="type" nameAlias=""
validation="" value="INLINE" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="AccessPolicy" locked="no" name="ACIAccPolicyInline" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="AccessRule" locked="no" name="ACIAccRule" nameAlias="" nodeNameOrLbl="FW"
scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="bidirectional" locked="no" mandatory="no" name="Bi-Directional"
nameAlias="" validation="" value="true" />
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="AccSourceZones" locked="no" name="AccSourceZones" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="SourceZones" locked="no" mandatory="no" name="SourceZone"
nameAlias="" targetName="externalInterface/int_security_zone" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="AccDestinationZones" locked="no" name="AccDestinationZones" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="DestinationZones" locked="no" mandatory="no" name="DestinationZone"
 nameAlias="" targetName="internalInterface/int_security_zone" />
</vnsFolderInst>
</vnsFolderInst>
</vnsFolderInst>
```

```
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="InterfaceConfig" locked="no" name="externalInterface" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsParamInst cardinality="unspecified" key="enabled" locked="no" mandatory="no" name="enabled" nameAlias=""
validation="" value="true" />
<vnsParamInst cardinality="unspecified" key="ifname" locked="no" mandatory="no" name="ifname" nameAlias=""
validation="" value="Consumer" />
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="int_inline_set" locked="no" name="int_inline_set" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="inline_set" locked="no" mandatory="no" name="InlineSetRel"
nameAlias="" targetName="IPSSet" />
</vnsFolderInst>
<vnsFolderInst cardinality="unspecified" ctrctNameOrLbl="inline-contract1" devCtxLbl=""
graphNameOrLbl="inline-graph" key="int_security_zone" locked="no" name="int_security_zone" nameAlias=""
nodeNameOrLbl="FW" scopedBy="epg">
<vnsCfgRelInst cardinality="unspecified" key="security_zone" locked="no" mandatory="no" name="security_zone"
nameAlias="" targetName="ConsSZIN" />
</vnsFolderInst>
</vnsFolderInst>
<fvRsProv matchT="AtleastOne" prio="unspecified" tnVzBrCPName="inline-contract1" />
<fvRsDomAtt classPref="encap" delimiter="" encap="unknown" encapMode="auto" instrImedcy="lazy"
netflowPref="disabled" primaryEncap="unknown" resImedcy="lazy" tDn="uni/vmmp-VMware/dom-SJvmDomain" />
<fvRsCustQosPol tnQosCustomPolName="" />
<fvRsBd tnFvBDName="app-inline" />
</fvAEPg>
</fvAp>
<fvRsTenantMonPol tnMonEPGPolName="" />
<vnsAbsGraph descr="" name="inline-graph" nameAlias="" ownerKey="" ownerTag="" uiTemplateType="UNSPECIFIED">
<vnsAbsTermNodeProv descr="" name="T2" nameAlias="" ownerKey="" ownerTag="">
<vnsOutTerm descr="" name="" nameAlias="" />
<vnsInTerm descr="" name="" nameAlias="" />
<vnsAbsTermConn attNotify="no" descr="" name="1" nameAlias="" ownerKey="" ownerTag="" />
</vnsAbsTermNodeProv> <vnsAbsTermNodeCon descr="" name="T1" nameAlias="" ownerKey="" ownerTag="">
<vnsOutTerm descr="" name="" nameAlias="" />
<vnsInTerm descr="" name="" nameAlias="" />
<vnsAbsTermConn attNotify="no" descr="" name="1" nameAlias="" ownerKey="" ownerTag="" />
</vnsAbsTermNodeCon>
<vnsAbsNode descr="" funcTemplateType="FW_ROUTED" funcType="GoTo" isCopy="no" managed="yes" name="FW" nameAlias=""
 ownerKey="" ownerTag="" routingMode="unspecified" sequenceNumber="0" shareEncap="no">
<vnsRsNodeToMFunc tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD" />
<vnsRsNodeToLDev tDn="uni/tn-ftd-inline/lDevVip-FW-inline" />
<vnsRsNodeToAbsFuncProf
tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/absFuncProfContr/absFuncProfGrp-FTDProfiles/absFuncProf-InlineModeForFTD"
 />
<vnsAbsFuncConn attNotify="no" descr="" name="provider" nameAlias="" ownerKey="" ownerTag="">
<vnsRsMConnAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD/mConn-internal" />
</vnsAbsFuncConn>
<vnsAbsFuncConn attNotify="no" descr="" name="consumer" nameAlias="" ownerKey="" ownerTag="">
<vnsRsMConnAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD/mConn-external" />
</vnsAbsFuncConn>
</vnsAbsNode>
<vnsAbsConnection adjType="L2" connDir="provider" connType="external" descr="" directConnect="no" name="C1"
nameAlias="" ownerKey="" ownerTag="" unicastRoute="yes">
<vnsRsAbsConnectionConns tDn="uni/tn-ftd-inline/AbsGraph-inline-graph/AbsTermNodeCon-T1/AbsTConn" />
<vnsRsAbsConnectionConns tDn="uni/tn-ftd-inline/AbsGraph-inline-graph/AbsNode-FW/AbsFConn-consumer" />
</vnsAbsConnection>
<vnsAbsConnection adjType="L2" connDir="provider" connType="external" descr="" directConnect="no" name="C2"
nameAlias="" ownerKey="" ownerTag="" unicastRoute="yes">
<vnsRsAbsConnectionConns tDn="uni/tn-ftd-inline/AbsGraph-inline-graph/AbsTermNodeProv-T2/AbsTConn" />
<vnsRsAbsConnectionConns tDn="uni/tn-ftd-inline/AbsGraph-inline-graph/AbsNode-FW/AbsFConn-provider" />
</vnsAbsConnection>
</vnsAbsGraph>
<fvBD arpFlood="yes" descr="" epClear="no" epMoveDetectMode="" ipLearning="yes" limitIpLearnToSubnets="no"
```

```
llAddr="::" mac="00:22:BD:F8:19:FF" mcastAllow="no" multiDstPktAct="bd-flood" name="web-inline" nameAlias=""
ownerKey="" ownerTag="" type="regular" unicastRoute="yes" unkMacUcastAct="proxy" unkMcastAct="flood"
vmac="not-applicable">
<fvRsIgmpsn tnIgmpSnoopPolName="" />
<fvRsCtx tnFvCtxName="ctx-inline" />
<fvRsBdToEpRet resolveAct="resolve" tnFvEpRetPolName="" />
<fvRsBDToNdP tnNdIfPolName="" />
</fvBD>
<fvBD arpFlood="yes" descr="" epClear="no" epMoveDetectMode="" ipLearning="yes" limitIpLearnToSubnets="no"
llAddr="::" mac="00:22:BD:F8:19:FF" mcastAllow="no" multiDstPktAct="bd-flood" name="app-inline" nameAlias=""
ownerKey="" ownerTag="" type="regular" unicastRoute="yes" unkMacUcastAct="proxy" unkMcastAct="flood"
vmac="not-applicable">
<fvRsIgmpsn tnIgmpSnoopPolName="" />
<fvRsCtx tnFvCtxName="ctx-inline" />
<fvRsBdToEpRet resolveAct="resolve" tnFvEpRetPolName="" />
<fvRsBDToNdP tnNdIfPolName="" />
</fvBD>
<fvCtx descr="" knwMcastAct="permit" name="ctx-inline" nameAlias="" ownerKey="" ownerTag="" pcEnfDir="ingress"
 pcEnfPref="enforced">
<vzAny descr="" matchT="AtleastOne" name="" nameAlias="" prefGrMemb="disabled" />
<fvRsOspfCtxPol tnOspfCtxPolName="" />
<fvRsCtxToEpRet tnFvEpRetPolName="" />
<fvRsCtxToExtRouteTagPol tnL3extRouteTagPolName="" />
<fvRsBgpCtxPol tnBgpCtxPolName="" />
</fvCtx>
<vnsDevMgr descr="" name="ftd-dev-mgr" nameAlias="" ownerKey="" ownerTag="">
<vnsRsDevMgrToMDevMgr tDn="uni/infra/mDevMgr-CISCO-FTDmgr_FI-1.0" />
<vnsCMgmts host="192.168.200.27" name="" nameAlias="" port="443" />
<vnsCCredSecret name="password" nameAlias="" />
<vnsCCred name="username" nameAlias="" value="admin" />
</vnsDevMgr>
<vnsLDevVip contextAware="single-Context" devtype="VIRTUAL" funcType="GoTo" isCopy="no" managed="yes"
mode="legacy-Mode" name="FW-inline" nameAlias="" packageModel="VIRTUAL" svcType="FW" trunking="no"> <vnsLIf
encap="unknown" name="external" nameAlias="">
<vnsRsMetaIf isConAndProv="no" tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mIfLbl-external" />
<vnsRsCIfAttN tDn="uni/tn-ftd-inline/lDevVip-FW-inline/cDev-Device1/cIf-[GigabitEthernet0/0]" />
</vnsLIf>
<vnsLIf encap="unknown" name="internal" nameAlias="">
<vnsRsMetaIf isConAndProv="no" tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mIfLbl-internal" />
<vnsRsCIfAttN tDn="uni/tn-ftd-inline/lDevVip-FW-inline/cDev-Device1/cIf-[GigabitEthernet0/1]" />
</vnsLIf>
<vnsRsALDevToDomP tDn="uni/vmmp-VMware/dom-SJvmDomain" />
<vnsCMgmt host="192.168.200.25" name="" nameAlias="" port="443" />
<vnsRsALDevToDevMgr tnVnsDevMgrName="ftd-dev-mgr" />
<vnsCDev devCtxLbl="" name="Device1" nameAlias="" vcenterName="SJvmController" vmName="Cisco routed vFTD2-inline">
<vnsRsCDevToCtrlrP tDn="uni/vmmp-VMware/dom-SJvmDomain/ctrlr-SJvmController" />
<vnsCMgmt host="192.168.200.25" name="" nameAlias="" port="443" />
<vnsCIf name="GigabitEthernet0/0" nameAlias="" vnicName="Network adapter 2" />
<vnsCIf name="GigabitEthernet0/1" nameAlias="" vnicName="Network adapter 3" />
<vnsCCredSecret name="password" nameAlias="" />
<vnsCCred name="username" nameAlias="" value="admin" />
</vnsCDev>
<vnsCCredSecret name="password" nameAlias="" />
<vnsRsMDevAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0" />
<vnsCCred name="username" nameAlias="" value="admin" />
</vnsLDevVip>
<vnsLDevCtx context="" ctrctNameOrLbl="inline-contract1" descr="" graphNameOrLbl="inline-graph" name=""
nameAlias="" nodeNameOrLbl="FW">
<vnsRsLDevCtxToLDev tDn="uni/tn-ftd-inline/lDevVip-FW-inline" />
<vnsLIfCtx connNameOrLbl="consumer" descr="" name="" nameAlias="" permitLog="no">
<vnsRsLIfCtxToLIf tDn="uni/tn-ftd-inline/lDevVip-FW-inline/lIf-external" />
<vnsRsLIfCtxToBD tDn="uni/tn-ftd-inline/BD-web-inline" />
</vnsLIfCtx>
<vnsLIfCtx connNameOrLbl="provider" descr="" name="" nameAlias="" permitLog="no">
```

```
<vnsRsLIfCtxToLIf tDn="uni/tn-ftd-inline/lDevVip-FW-inline/lIf-internal" />
<vnsRsLIfCtxToBD tDn="uni/tn-ftd-inline/BD-app-inline" />
</vnsLIfCtx>
</vnsLDevCtx>
<vnsLDevCtx context="" ctrctNameOrLbl="inline-contract" descr="" graphNameOrLbl="inline-graph" name=""
nameAlias="" nodeNameOrLbl="FW">
<vnsRsLDevCtxToLDev tDn="uni/tn-ftd-inline/lDevVip-FW-inline" />
<vnsLIfCtx connNameOrLbl="consumer" descr="" name="" nameAlias="" permitLog="no">
<vnsRsLIfCtxToLIf tDn="uni/tn-ftd-inline/lDevVip-FW-inline/lIf-external" />
<vnsRsLIfCtxToBD tDn="uni/tn-ftd-inline/BD-web-inline" />
</vnsLIfCtx>
<vnsLIfCtx connNameOrLbl="provider" descr="" name="" nameAlias="" permitLog="no">
<vnsRsLIfCtxToLIf tDn="uni/tn-ftd-inline/lDevVip-FW-inline/lIf-internal" />
<vnsRsLIfCtxToBD tDn="uni/tn-ftd-inline/BD-app-inline" />
</vnsLIfCtx>
</vnsLDevCtx>
<vnsSvcCont />
</fvTenant>
</imdata>
```

VLAN Trunking Support on the vFTD

```
testVLANxml='''\
<polUni>
    <fvTenant dn="uni/tn-tenant1" name="tenant1">
        <vnsLDevVip name="Firewall" name="Firewall" trunking="yes">
        </vnsLDevVip>
    </fvTenant>
</polUni>
'''
```

Dynamic EPG Update

```
testDynamicEPGxml='''\
<polUni>
    <fvTenant name="tenant1">
        <vnsAbsGraph name = "WebGraph">
            <vnsAbsNode name = "FW1">
                <vnsAbsFuncConn name = "external" attNotify="yes">
                    <vnsRsMConnAtt tDn="uni/infra/mDev-CISCO-FTD_FI-1.0/mFunc-FTD/mConn-external" />
                   <vnsRsConnToCtxTerm tDn="uni/tn-tenant1/AbsGraph_WebGraph/AbsNode-_FTD/AbsFConn-consumer"/>

                </vnsAbsFuncConn>
            </vnsAbsNode>
          </vnsAbsGraph>
    </fvTenant>
</polUni>
'''
```

IPv4 Static Route

```
<vnsFolderInst annotation="" cardinality="unspecified" ctrctNameOrLbl="C1" devCtxLbl="" graphNameOrLbl="SG-R"
 key="InterfaceConfig" locked="no" me="externalInterface" nameAlias="" nodeNameOrLbl="N1" scopedBy="epg">
 <vnsParamInst annotation="" cardinality="unspecified" key="ifname" locked="no" mandatory="no" name="ifname"
nameAlias="" validation="" value="Consumer"/>
 <vnsParamInst annotation="" cardinality="unspecified" key="enabled" locked="no" mandatory="no" name="enabled"
 nameAlias="" validation="" value="true"/>
 <vnsFolderInst annotation="" cardinality="unspecified" ctrctNameOrLbl="C1" devCtxLbl="" graphNameOrLbl="SG-R"
 key="StaticRoute" locked="no" name="StaticRoute" nameAlias="" nodeNameOrLbl="N1" scopedBy="epg">
  <vnsFolderInst annotation="" cardinality="unspecified"ctrctNameOrLbl="C1" devCtxLbl="" graphNameOrLbl="SG-R"
```

```
 key="IPv4StaticRoute" locked="no" name="IPv4StaticRoute" nameAlias="" nodeNameOrLbl="N1" scopedBy="epg">
   <vnsParamInst annotation="" cardinality="unspecified" key="network" locked="no" mandatory="no" name="network"
 nameAlias="" validation="" value="60.0.0.0/24"/>
   <vnsParamInst annotation="" cardinality="unspecified" key="gateway" locked="no" mandatory="no" name="gateway"
 nameAlias="" validation="" value="50.0.0.1"/>
    <vnsParamInst annotation="" cardinality="unspecified" key="metric" locked="no" mandatory="no" name="metric"
 nameAlias="" validation="" value="1"/>
  </vnsFolderInst>
 </vnsFolderInst>
 <vnsFolderInst annotation="" cardinality="unspecified" ctrctNameOrLbl="C1" devCtxLbl="" graphNameOrLbl="SG-R"
 key="IPv4Config" locked="no" name="IPv4Config" nameAlias="" nodeNameOrLbl="N1" scopedBy="epg">
  <vnsFolderInst annotation="" cardinality="unspecified" ctrctNameOrLbl="C1" devCtxLbl="" graphNameOrLbl="SG-R"
 key="static" locked="no" name="static" nameAlias="" nodeNameOrLbl="N1" scopedBy="epg">
   <vnsParamInst annotation="" cardinality="unspecified" key="address" locked="no" mandatory="no" name="address"
 nameAlias="" validation="" value="30.0.0.1/24"/>
  </vnsFolderInst>
 </vnsFolderInst>
 <vnsFolderInst annotation="" cardinality="unspecified" ctrctNameOrLbl="C1" devCtxLbl="" graphNameOrLbl="SG-R"
 key="int_security_zone" locked="no" name="int_security_zone" nameAlias="" nodeNameOrLbl="N1" scopedBy="epg">
  <vnsCfgRelInst annotation="" cardinality="unspecified" key="security_zone" locked="no" mandatory="no"
name="security_zone" nameAlias="" targetName="ConsSZRT"/>
 </vnsFolderInst>
</vnsFolderInst>
```

Active MAC Address

```
<polUni>
  <fvTenant name="ftd\">
     <vnsAbsGraph name = "WebGraph">
        <vnsAbsNode name = "FW1">
            <vnsAbsDevCfg>
                   <vnsAbsFolder key="InterfaceConfig" name="externalInterface">
                          <vnsAbsParam key="activeMACAddress" name="activeMACAddress" value="cccc.cccc.cccc"/>

                   </vnsAbsFolder>
            </vnsAbsDevCfg>
        </vnsAbsNode>
     </vnsAbsGraph>
  </fvTenant>
</polUni>
```

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