配置Nexus控制面板协调器将终端从一个DC迁移到另一个DC

目录

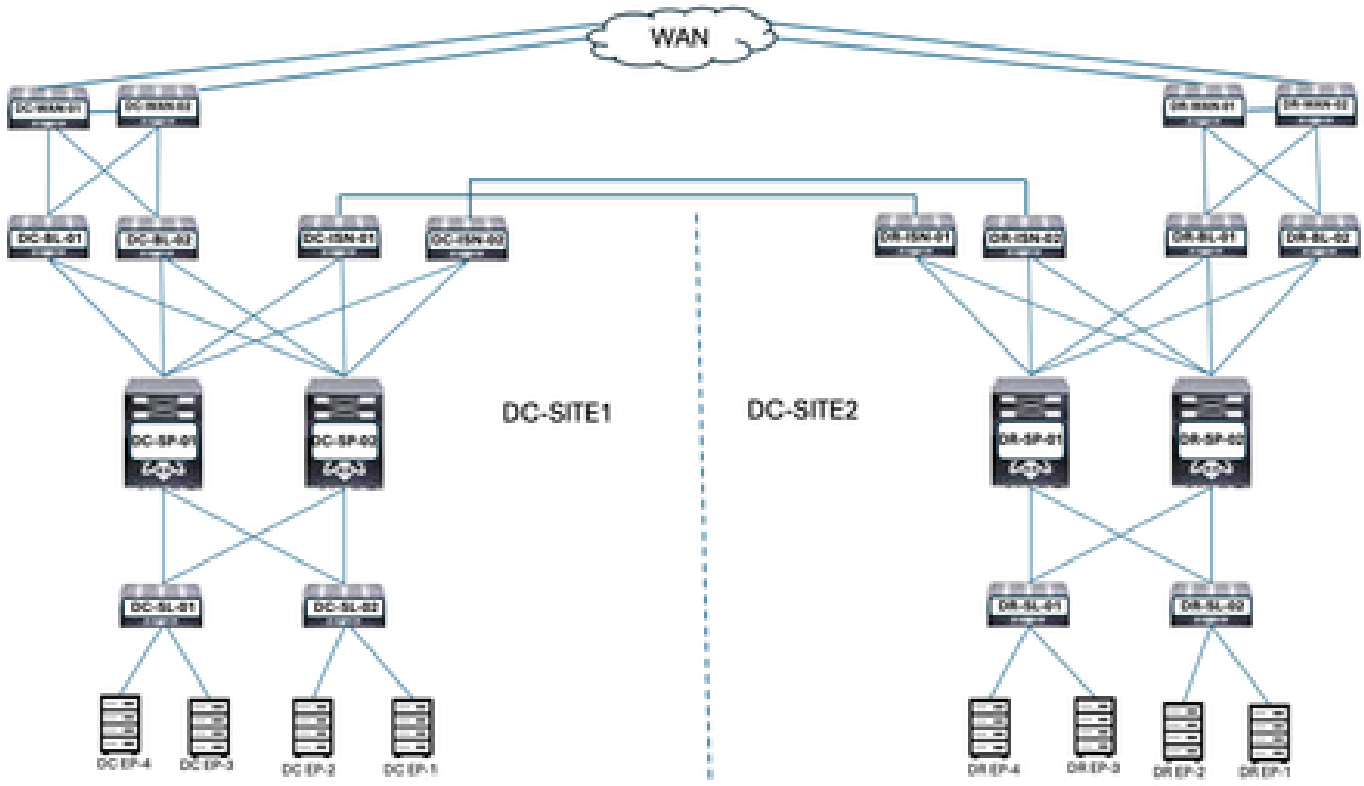
简介

本文档介绍将终端从一个数据中心迁移到另一个数据中心所需的设计和配置更改。

物理拓扑

图1显示了两个数据中心的互连。

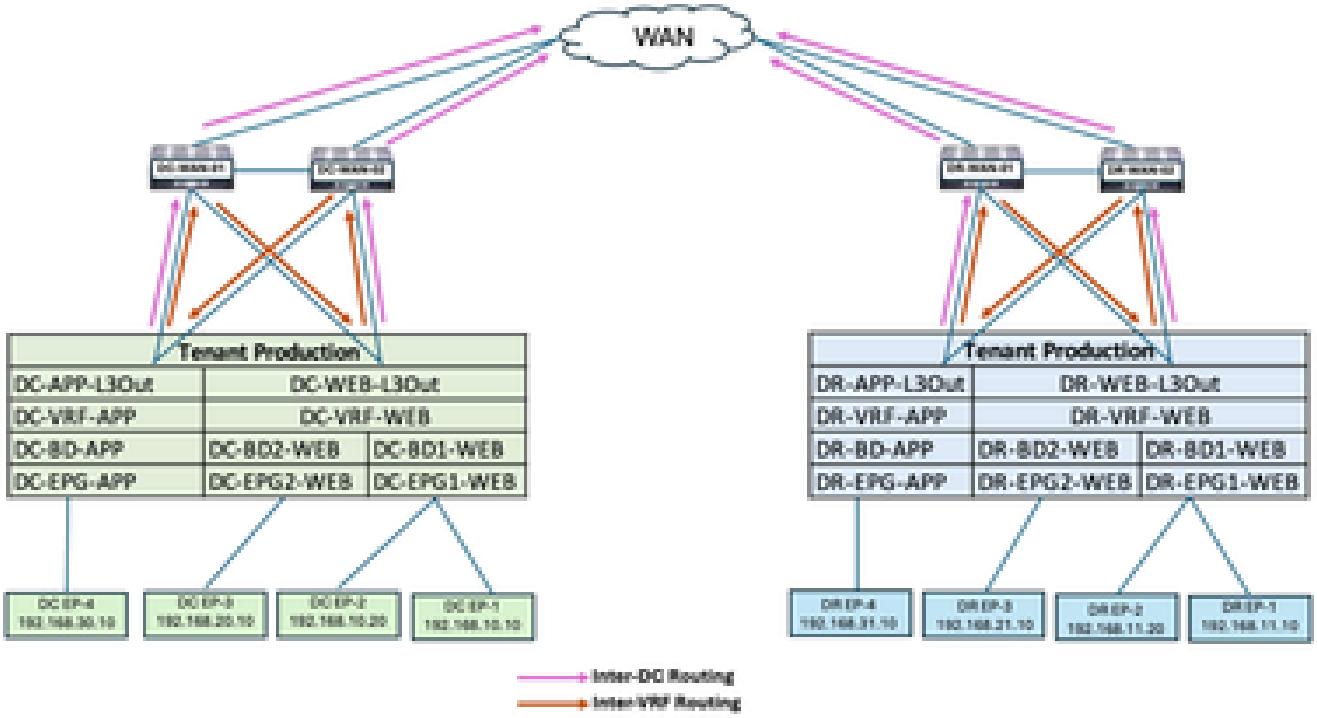
图 1：物理拓扑



DC和DR位置具有以应用为中心的基础设施(ACI)。DC和DR位置包含WAN交换机、边界枝叶、主干、站点间网络设备(ISN)、服务器枝叶和连接的终端。

逻辑拓扑

图 2：逻辑拓扑



两个站点中配置的逻辑对象：

- 租户生产在DC和DR站点配置。
- DC-VRF-WEB和DC-VRF-APP配置在DC-SITE1中。DR-VRF-WEB和DR-VRF-APP配置在DR-SITE2中。
- 每个VRF在指向WAN交换机的边界枝叶上配置有本地L3Outs。在指向WAN交换机的边界枝叶上配置默认路由。
- WAN交换机配置了用于VRF间和DC间通信的静态路由。
- 两个数据中心都配置了本地BD和EPG。DC有DC-BD1-WEB/DC-EPG1-WEB、DC-BD2-WEB/DC-EPG2-WEB和DC-BD-APP/DC-EPG-APP。DR有DR-BD1-WEB/DR-EPG1-WEB、DR-BD2-WEB和DR-BD-APP DR-EPG-APP
- 存在在WEB和APP EPG中连接的终端。
- DC-SITE1和DR-SITE2已添加到Nexus Dashboard Orchestrator。

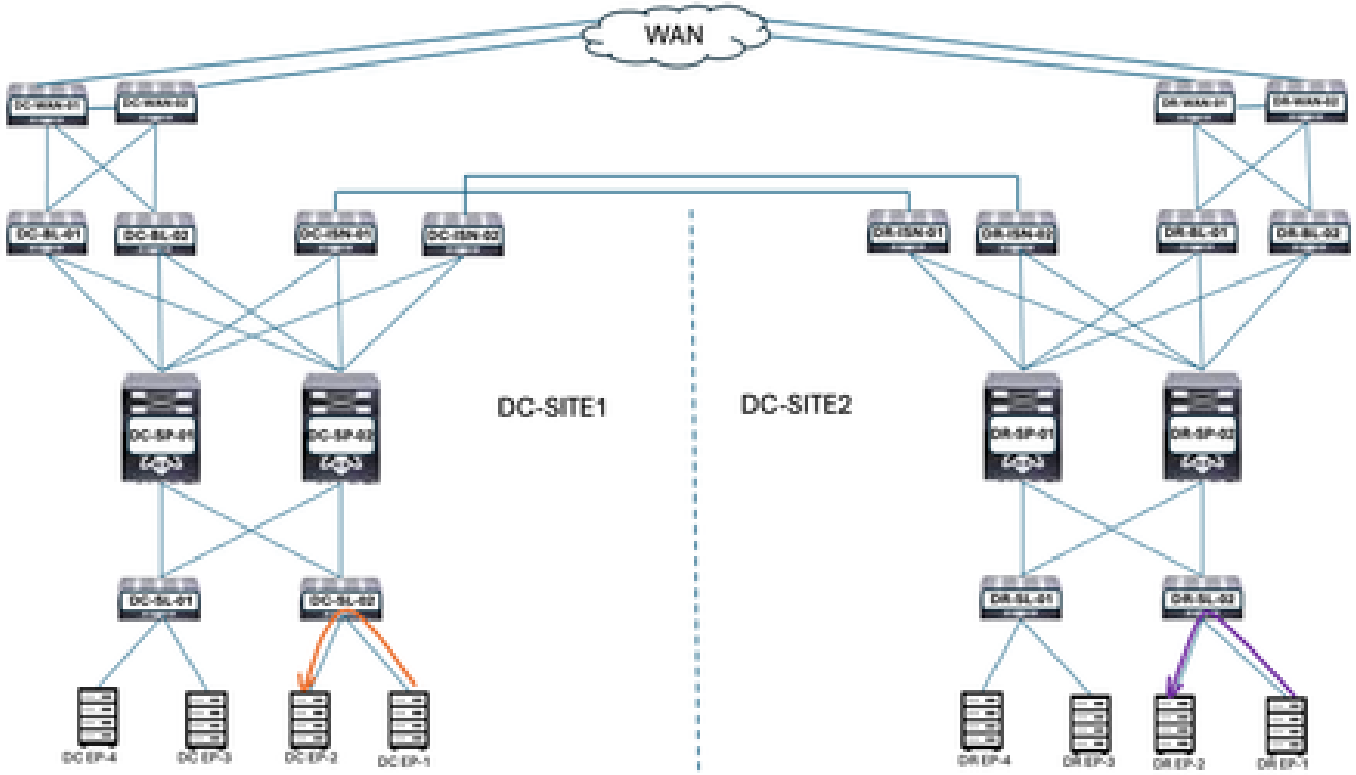
终端迁移前的流量

数据中心中有多种类型的流量：

- EPG内流量
- EPG间流量
- VRF间流量
- DC间流量

EPG内流量

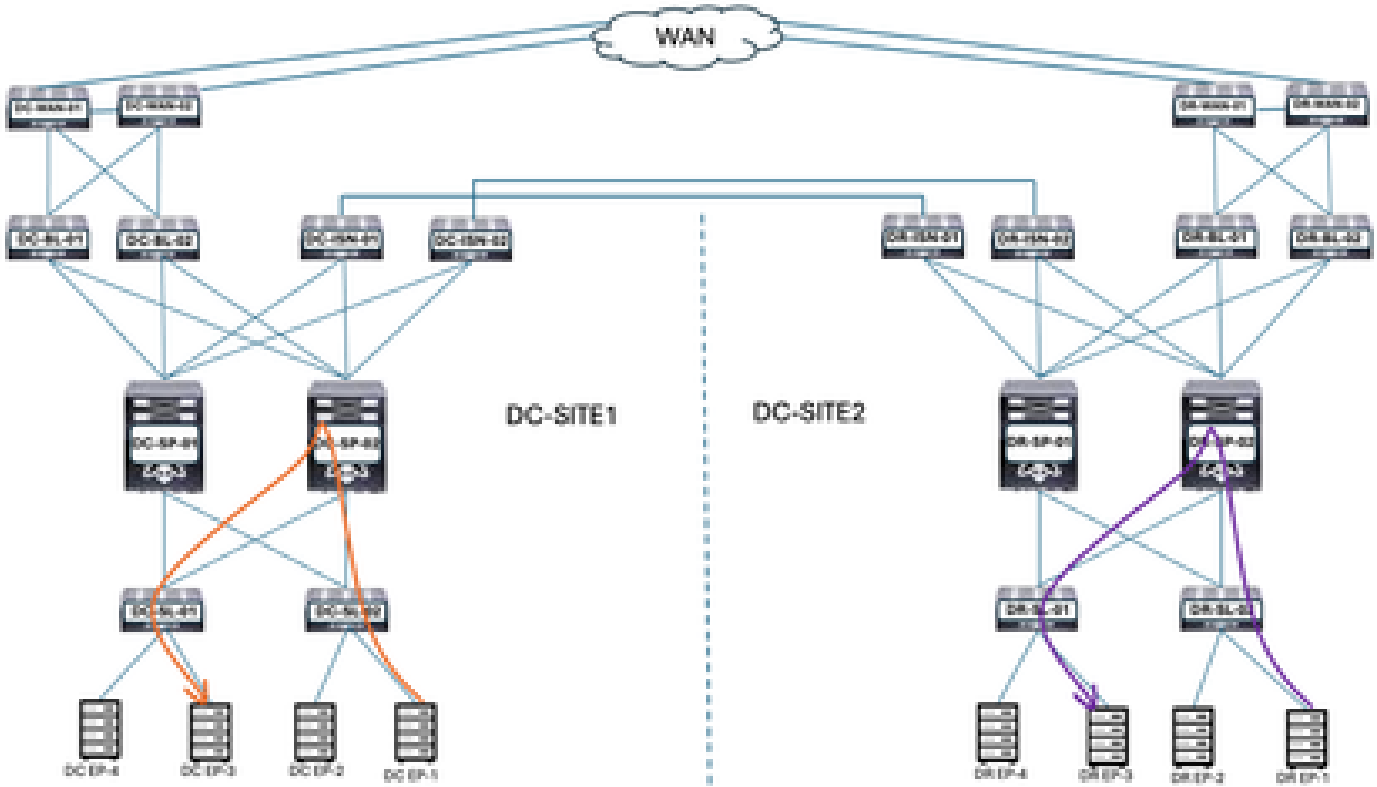
图 3：EPG内流量



DC-EP-1和DC-EP-2之间的通信是EPG内通信，因为两个终端都属于DC-EPG1-WEB。DR-EP-1和DR-EP-2之间的通信是EPG内通信，因为两个终端都属于DR-EPG1-WEB。

EPG间流量

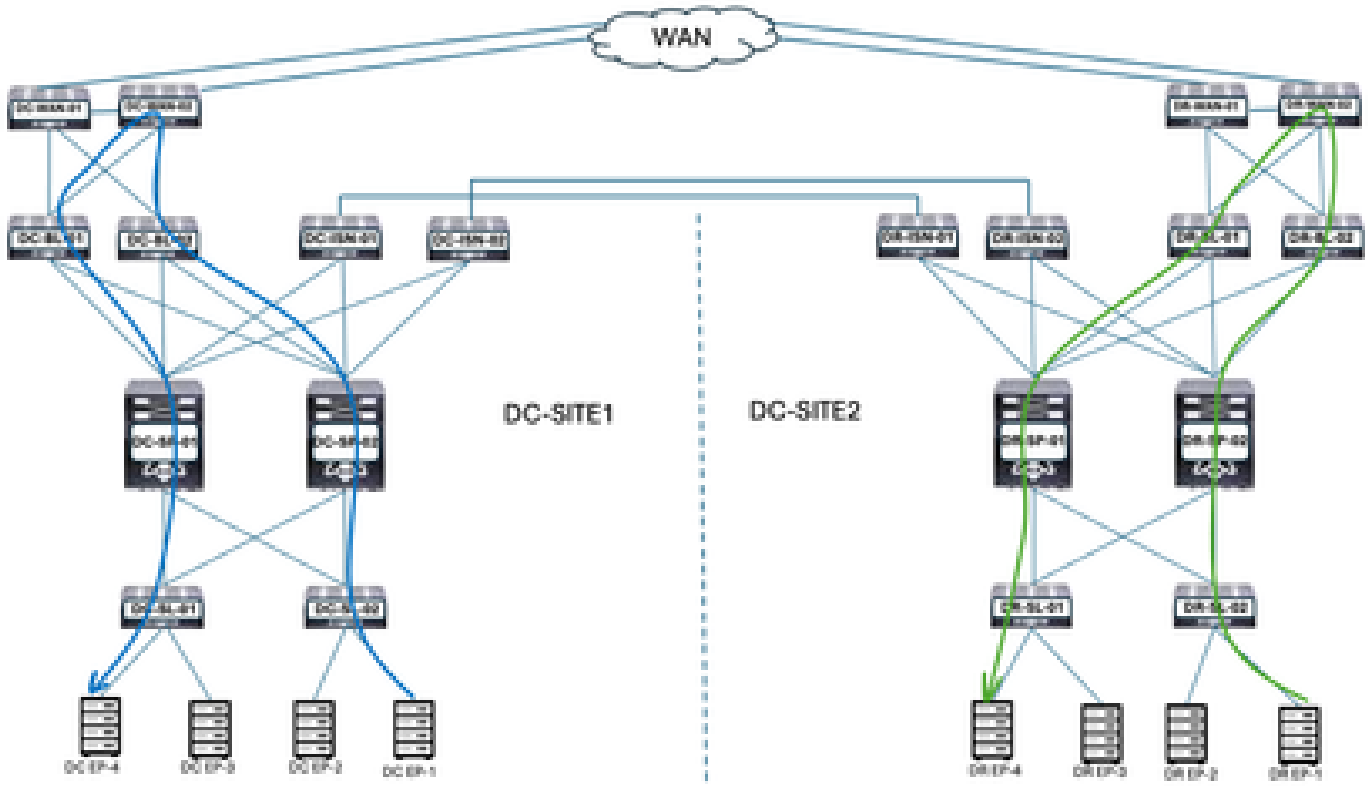
图 4：EPG间流量



DC-EP-1和DC-EP-3分别是DC-EPG1-WEB和DC-EPG2-WEB的一部分，这两个终端之间的通信是EPG间流量。DR-EP-1和DR-EP-3分别是DR-EPG1-WEB和DR-EPG2-WEB的一部分，这两个终端之间的通信是EPG间流量。

VRF间流量

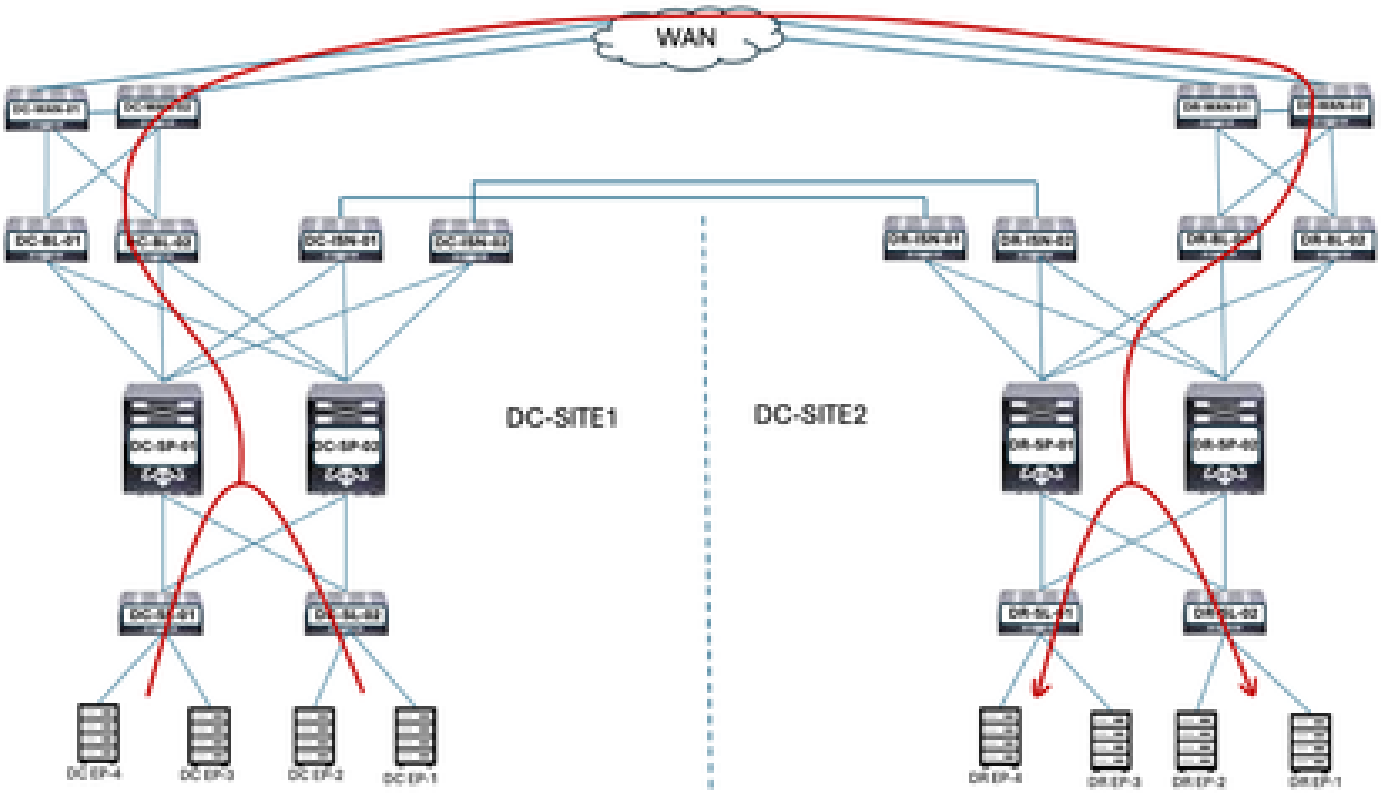
图 5：VRF间流量



DC边界枝叶交换机将流量转发到DC WAN交换机，以实现任何VRF间通信。DC WAN交换机用于VRF间通信。DC-EP-1/EP-2(VRF WEB)通过WAN交换机与DC-EP-4(VRF APP)通信。DR边界枝叶将流量转发到DR WAN交换机，以便进行VRF间通信。DR WAN交换机用于VRF间通信。DR-EP-1/EP-2(VRF WEB)通过WAN交换机与DR-P-4(VRF APP)通信。

DC间流量

图 6：DC间流量



DC终端和DR终端之间的通信转发到边界枝叶。边界枝叶将流量转发到WAN交换机。WAN交换机用于DC间通信。

迁移计划

Nexus Dashboard Orchestrator用于在两个站点之间创建多站点，跨站点和终端的EPG/BD从DC-SITE1迁移到DR-SITE2,

方案1创建

通过Nexus Dashboard Orchestrator创建的方案1。

图 7：租户模板 — 添加架构

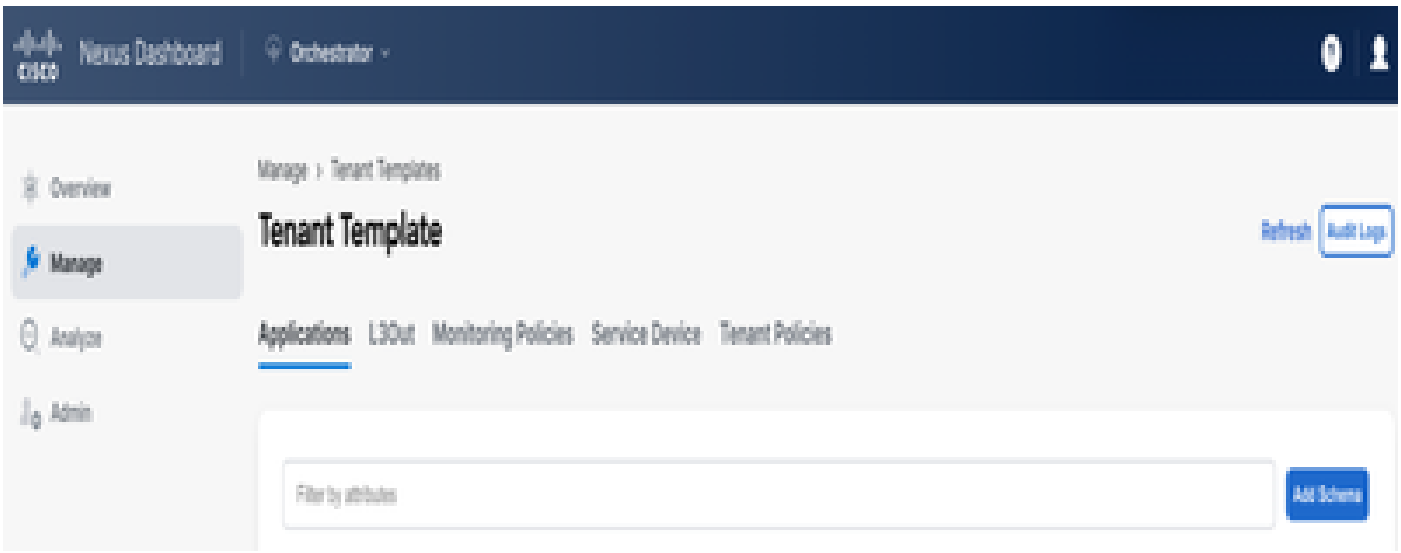
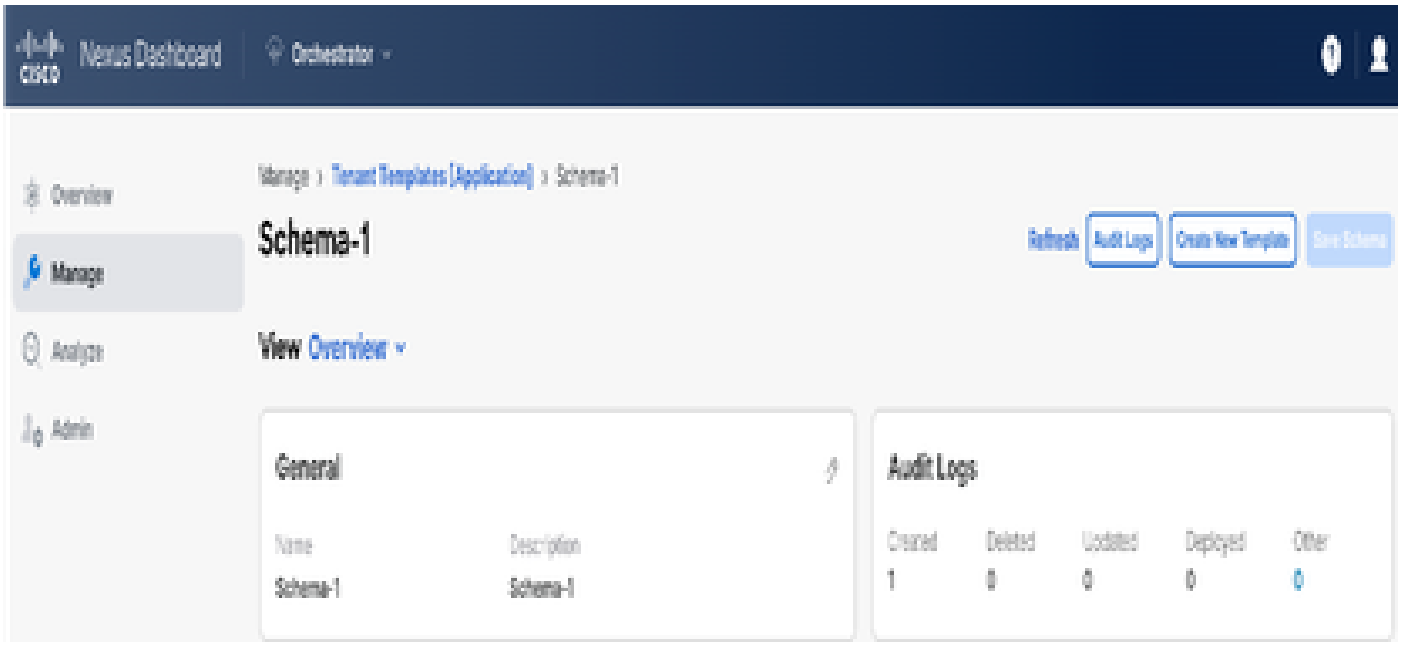


图 8：添加架构名称



模板 — VRF — 合同 — 扩展创建

在架构1中创建了Template-VRF-Contract-Longed。DC-SITE1和DR-SITE2将属于此模板，租户生产将与同一模板关联。这是拉伸的模板。VRF和合同必须作为单独模板的一部分，因为这些对象在其他BD/EPG之间共享。此模板用于将DC-SITE1 VRF和合同延伸到DR-SITE2。

图 9：添加应用模板 — 选择ACI多云

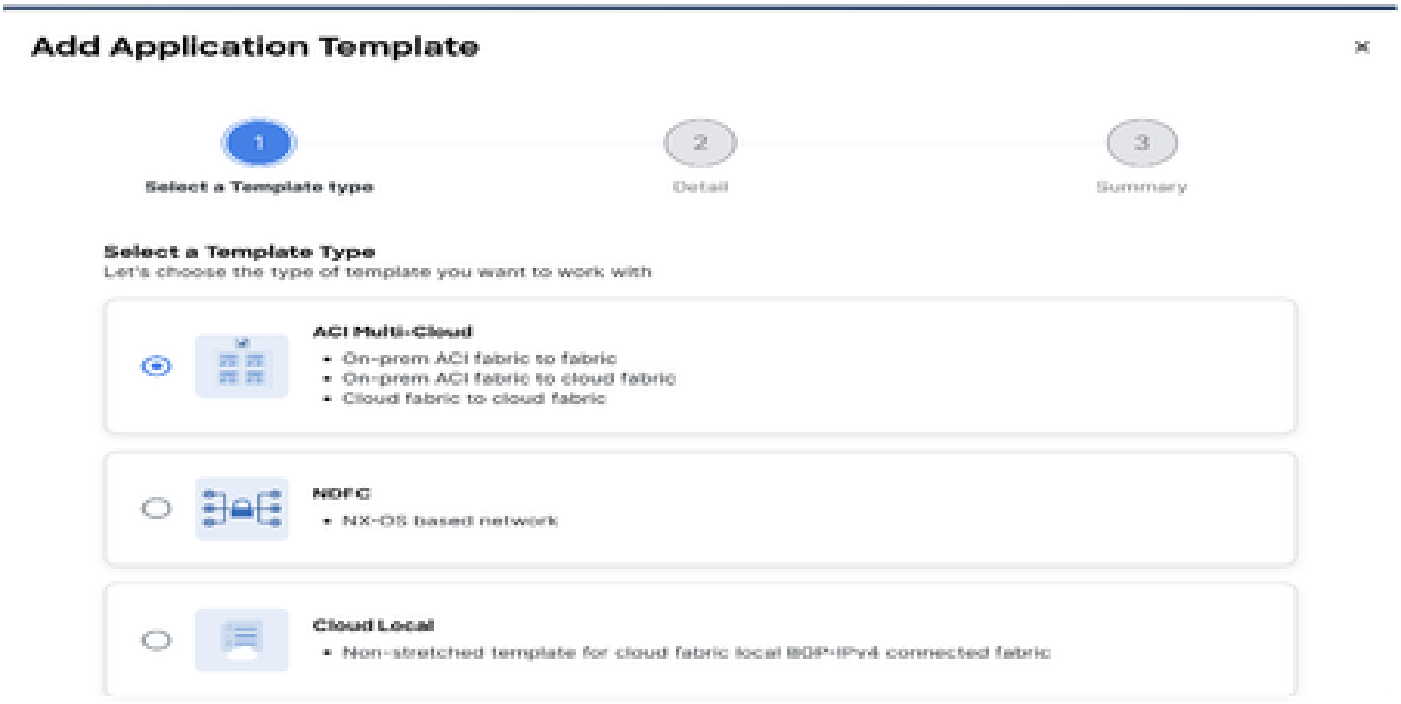


图 10：添加模板名称Template-WEB-VRF-Contract-Longed，选择租户生产

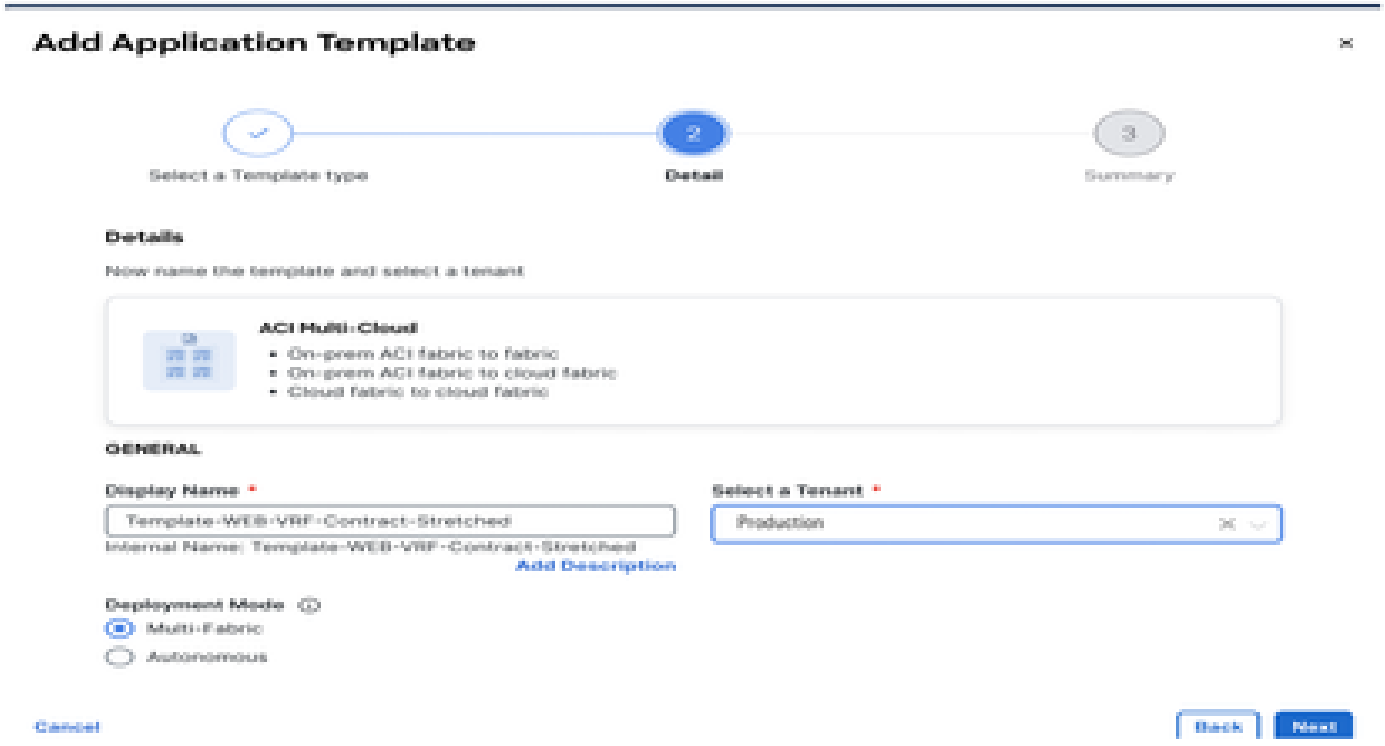
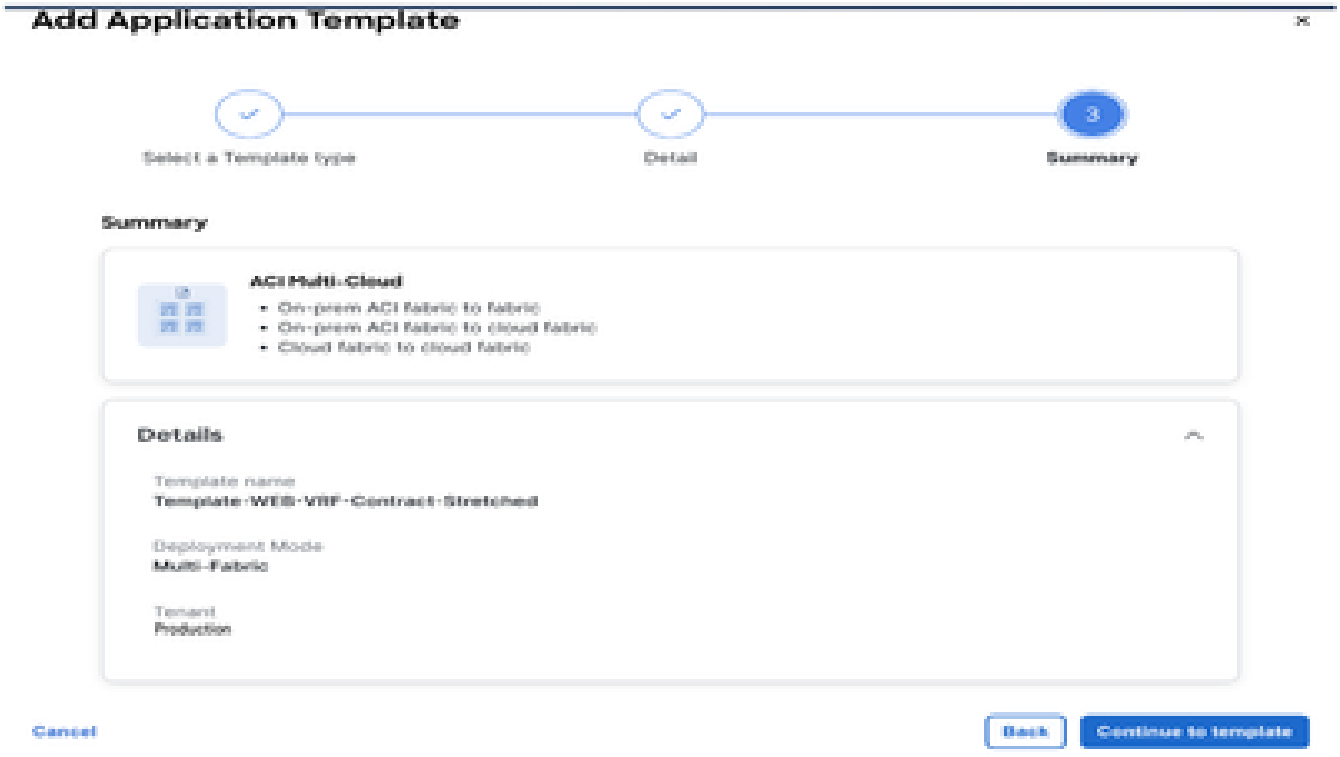


图 11：模板 — WEB-VRF — 合同 — 扩展详细信息



导入Template-VRF-Contract-Longed中的VRF-Contract

从DC-SITE1导入DC-VRF-WEB和DC-VRF-WEB-Contract。为EPG间通信和EPG到L3Out通信创建合同。

图 12：点击Import并选择DC-SITE1

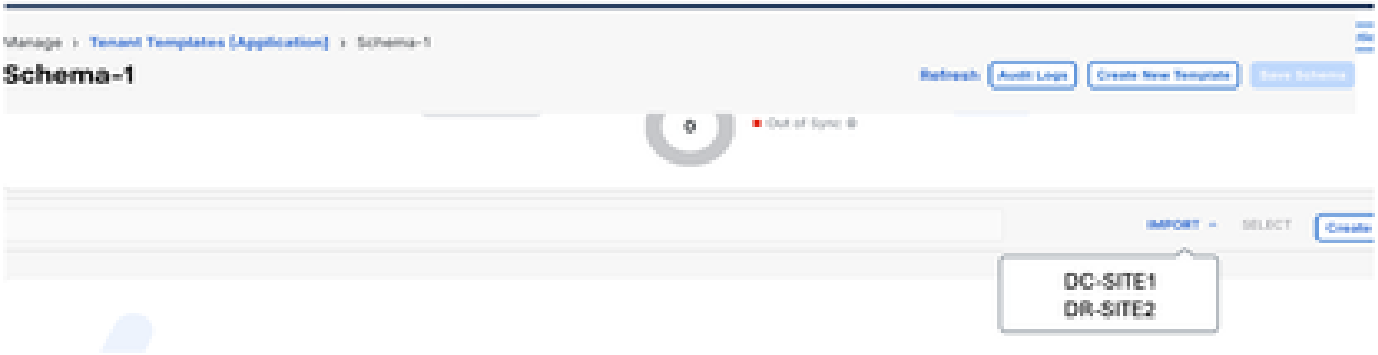


图 13：从DC-SITE1中选择合同

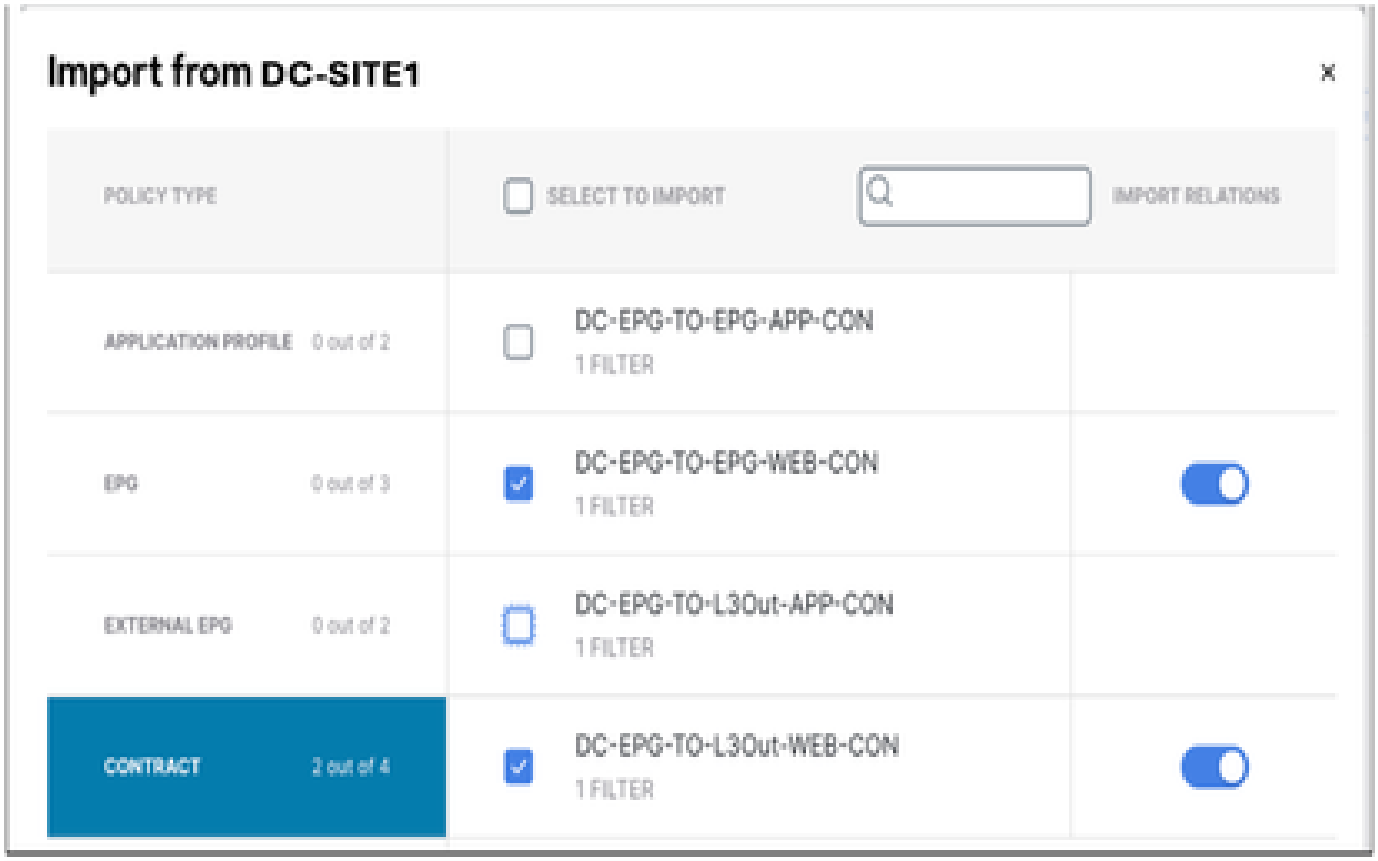


图 14：从DC-SITE1中选择过滤器

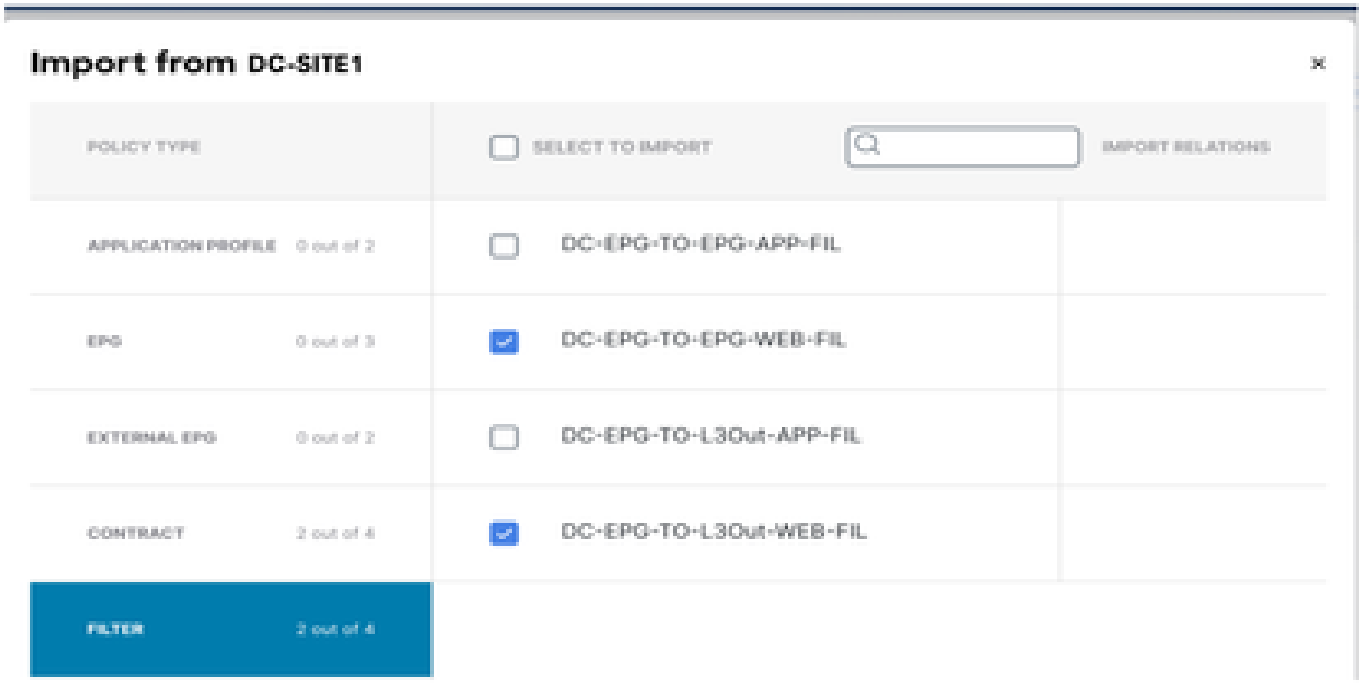


图 15：从DC-SITE1中选择VRF

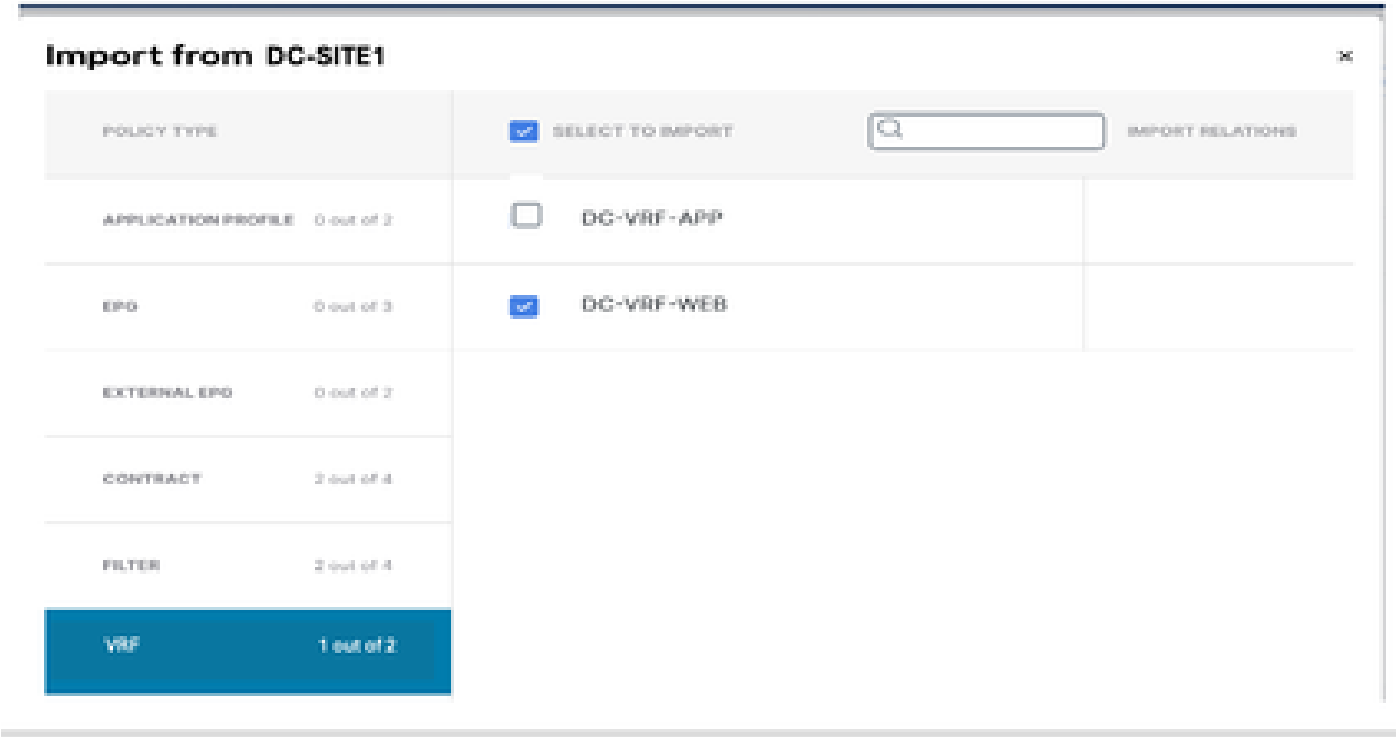
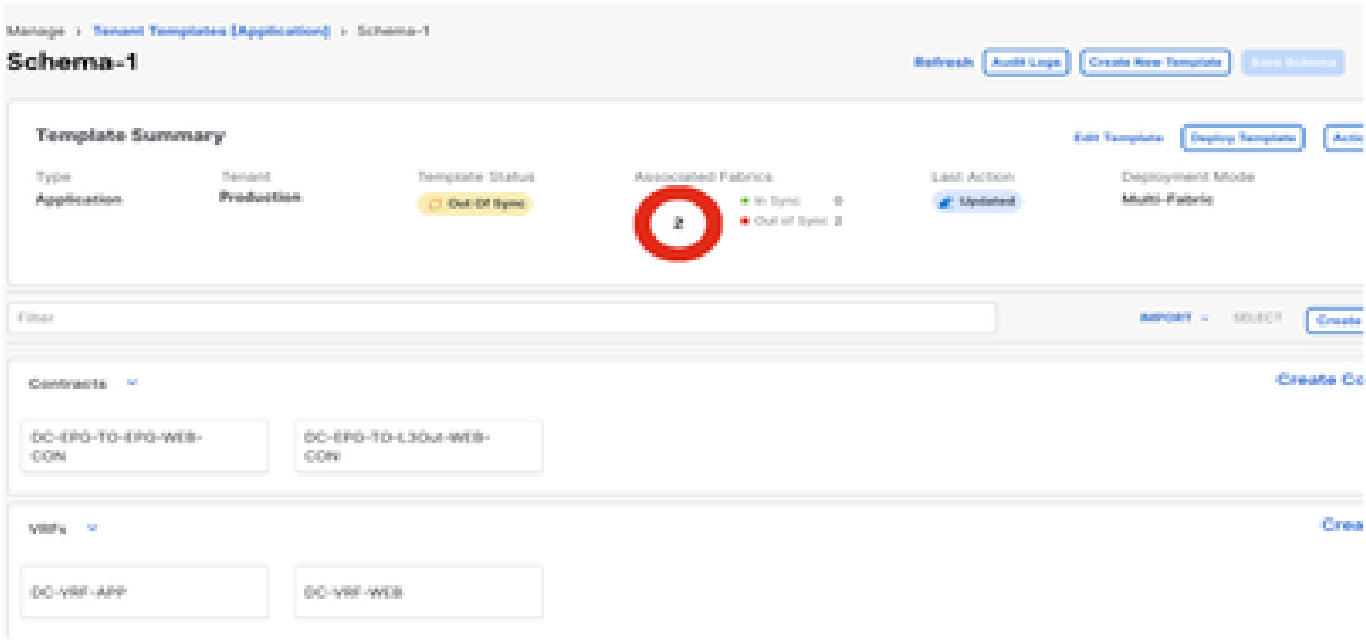


图 16：模板 — WEB-VRF — 合同 — 使用VRF和合同信息扩展



部署模板 — VRF — 合同 — 延长

点击Deploy Template-VRF-Contract-Longed并选择DC-SITE1和DR-SITE2

图17:向模板 — VRF — 合同 — 拉伸添加交换矩阵

图 18：部署外部同步模板

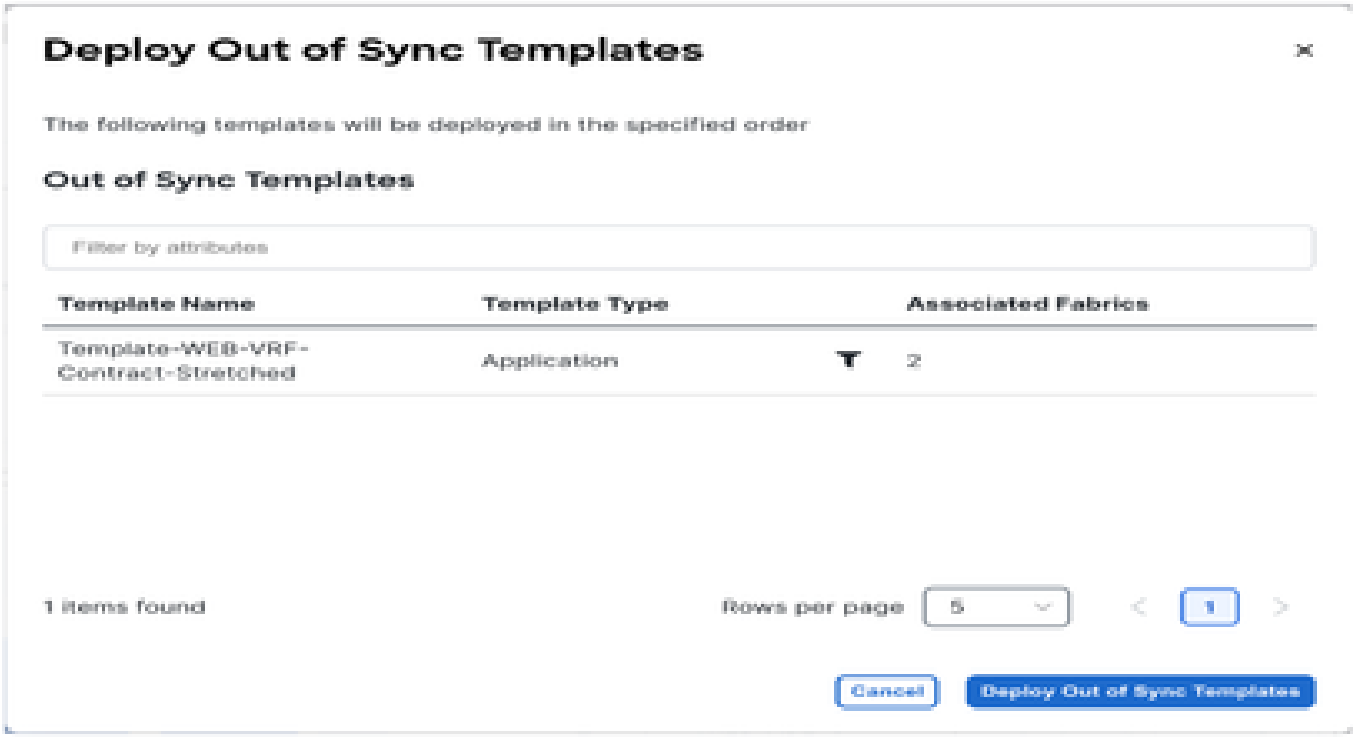


图 19：已完成部署

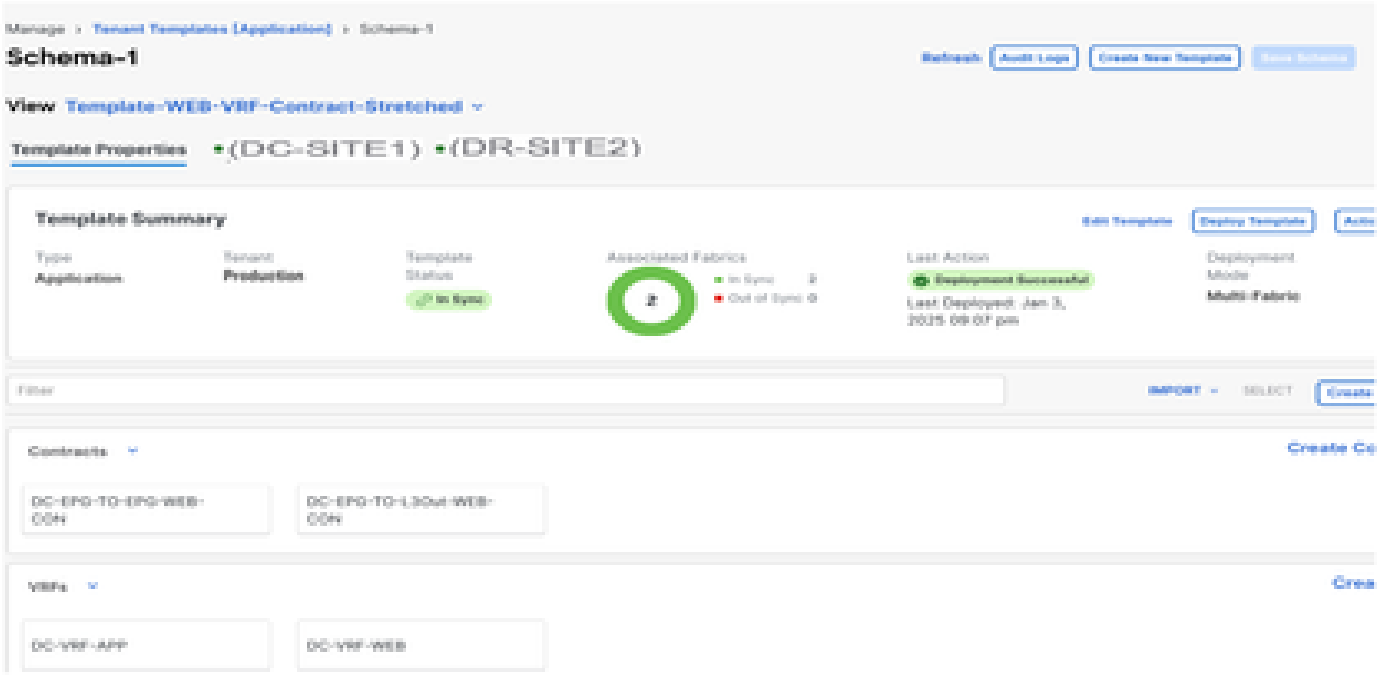
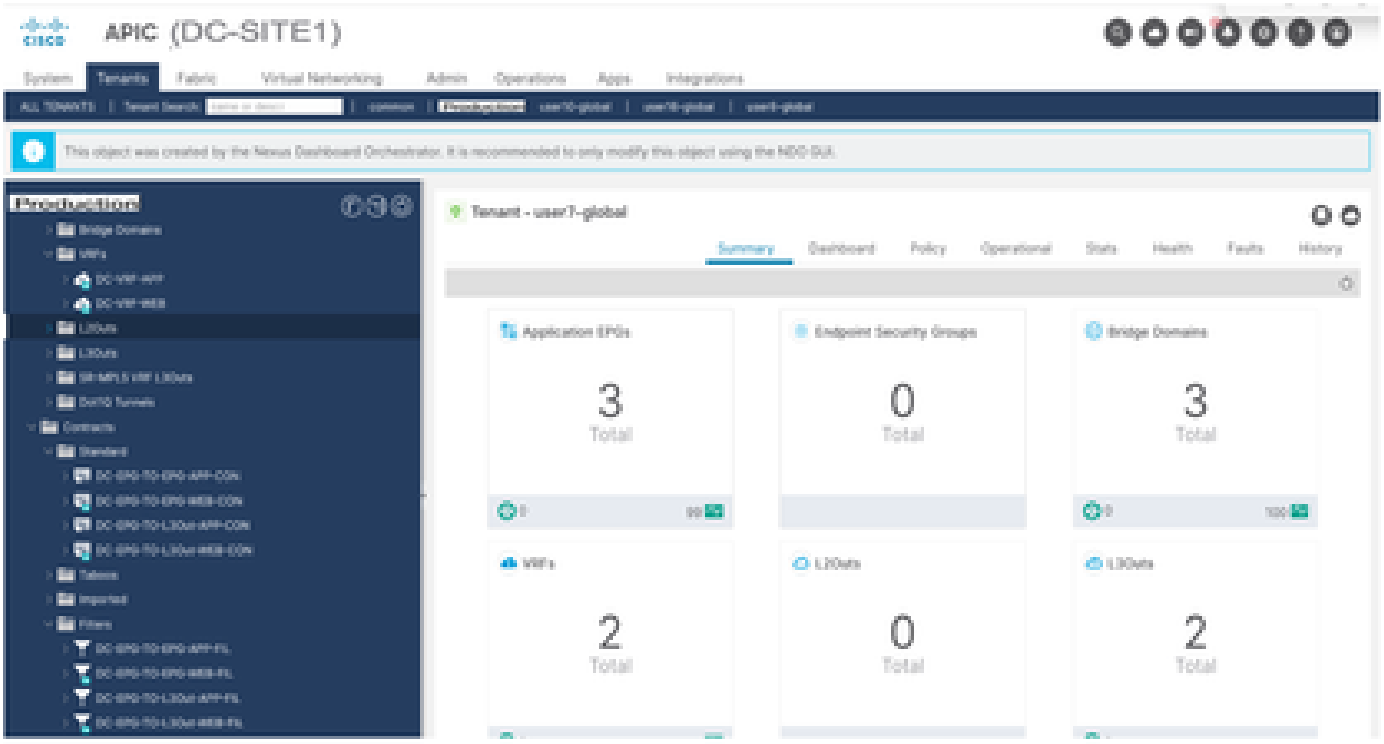
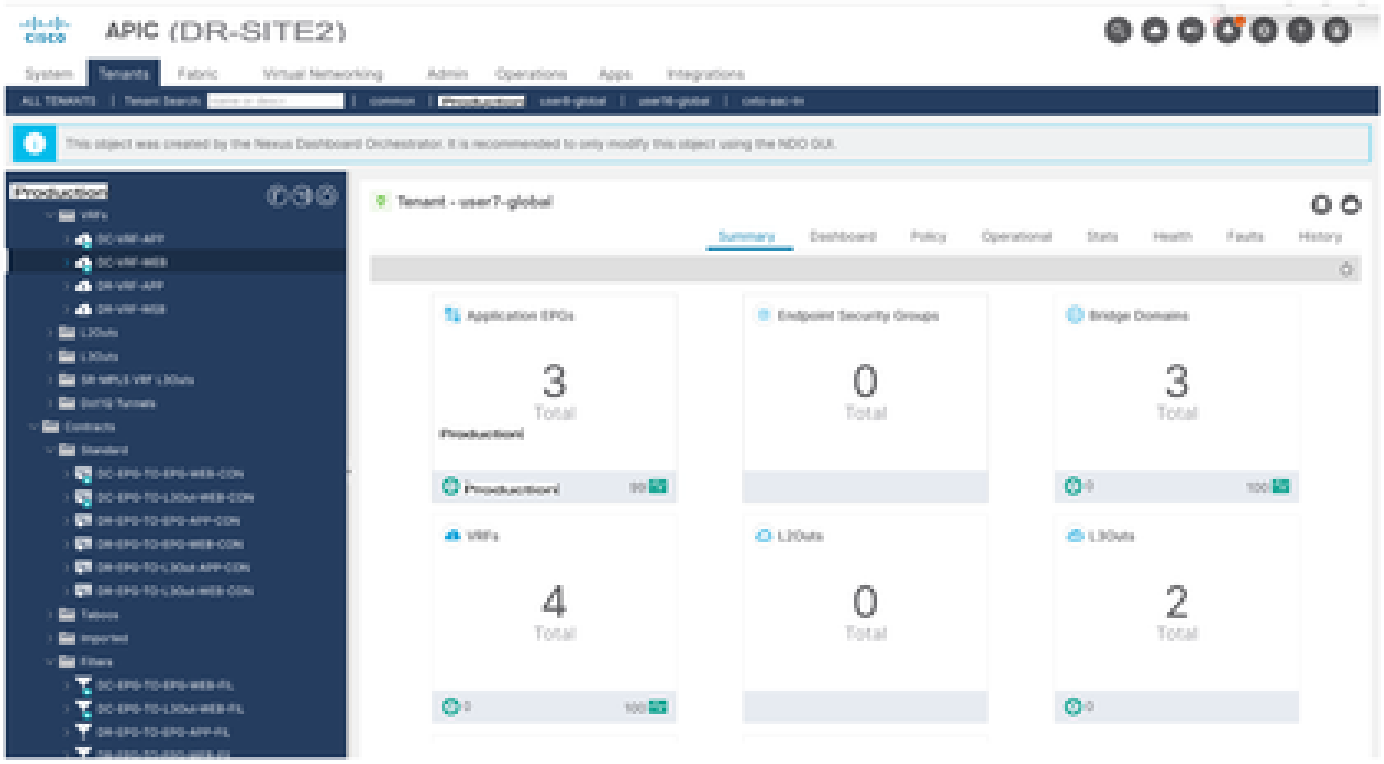


图 20：验证两个站点上部署的VRF和合同





模板 — EPG1-BD1 — 拉伸创建

在架构1中创建了Template-EPG1-BD1-Streted。DC-SITE1和DR-SITE2已添加到与同一模板关联的模板和租户 — Production。这是拉伸的模板。此模板用于将DC-EPG1-WEB和DC-BD1-WEB拉伸到DR-SITE2。

图 21：添加应用模板 — 选择ACI多云

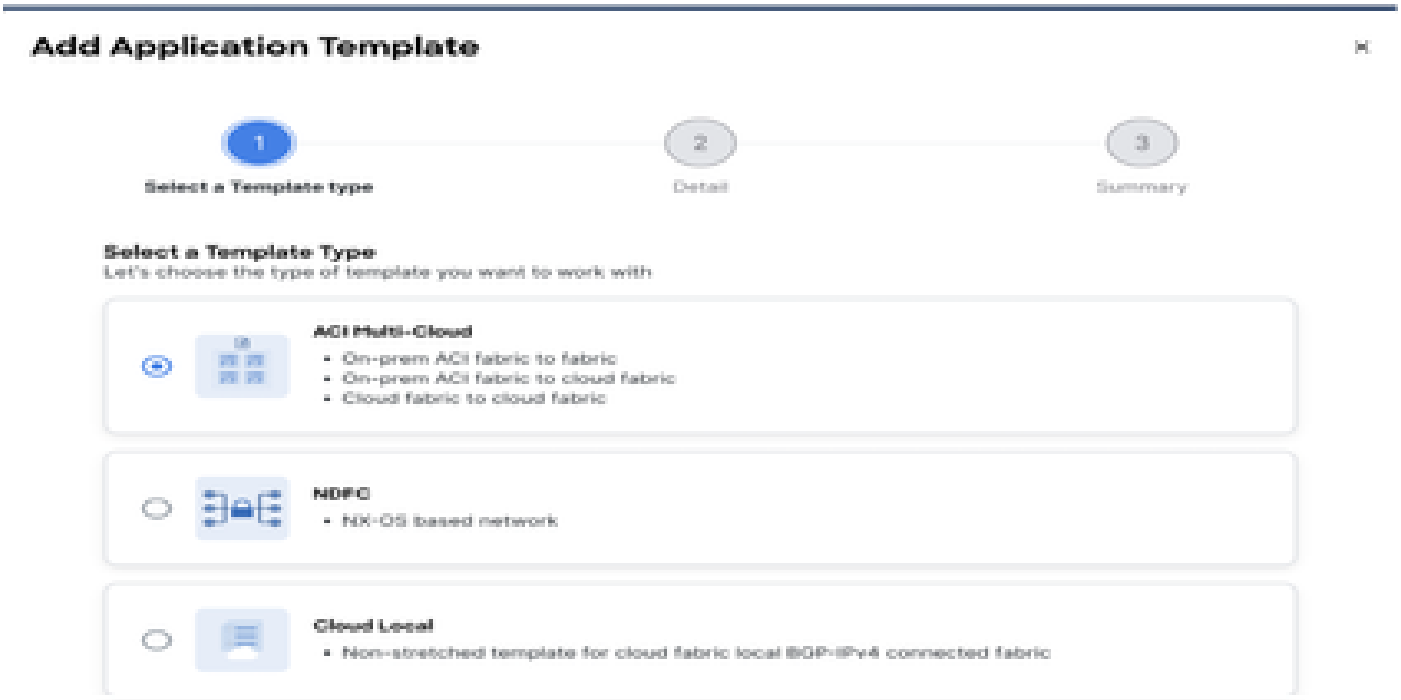


图 22：添加模板名称Template-EPG1-BD1-Proved，选择租户生产

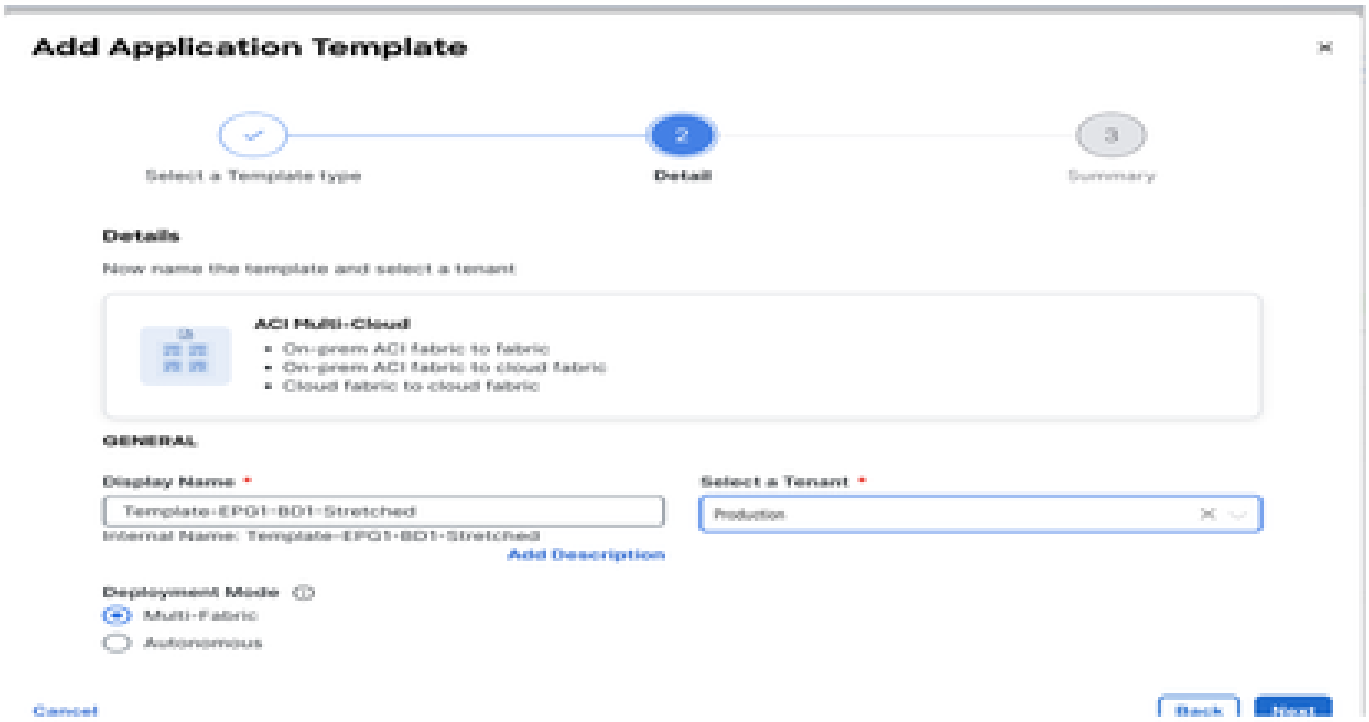
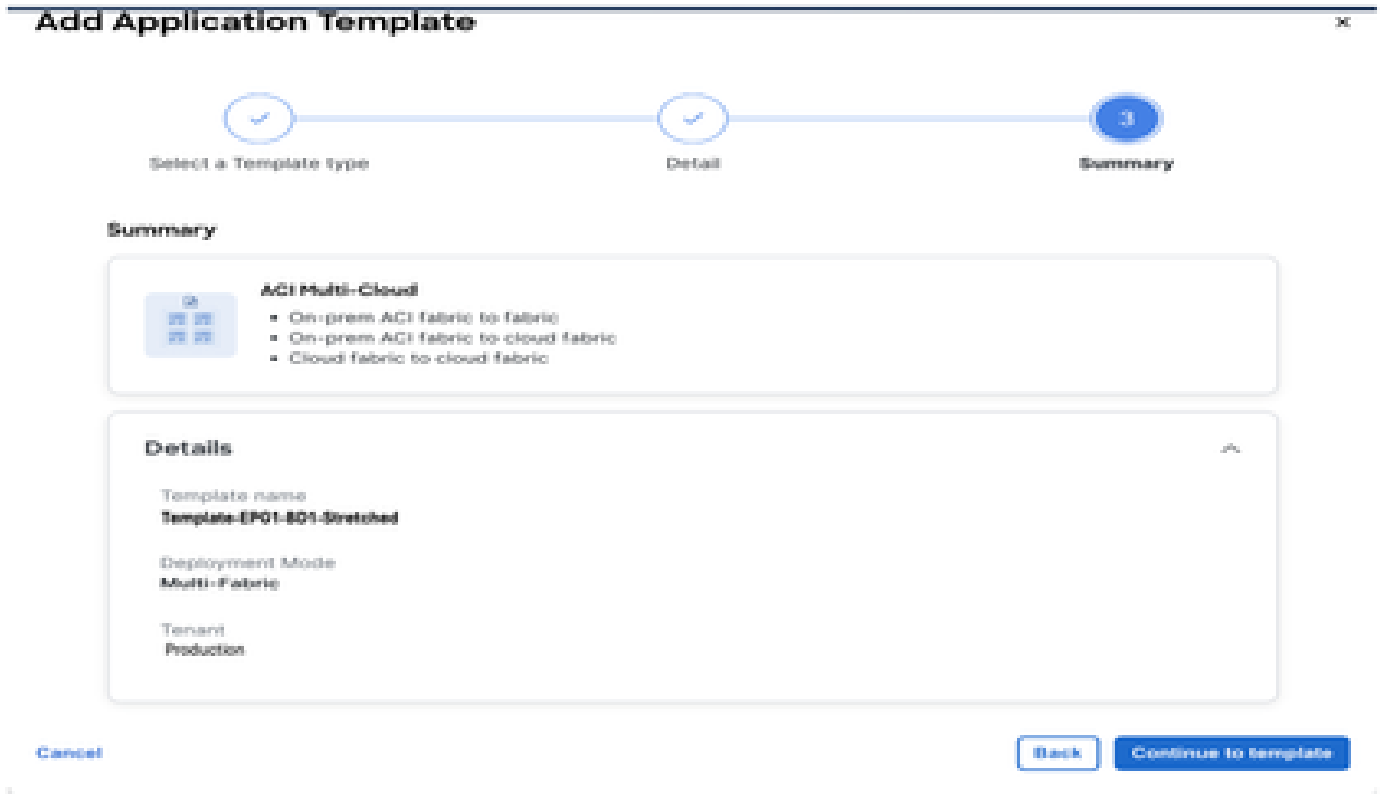


图 23：Template-EPG1-BD1-Tended Details



在Template-EPG1-BD1-Tended中导入EPG1-BD1

从DC-SITE1导入DC-EPG1-WEB和DC-BD1-WEB。

图 24：点击Import并选择DC-SITE1

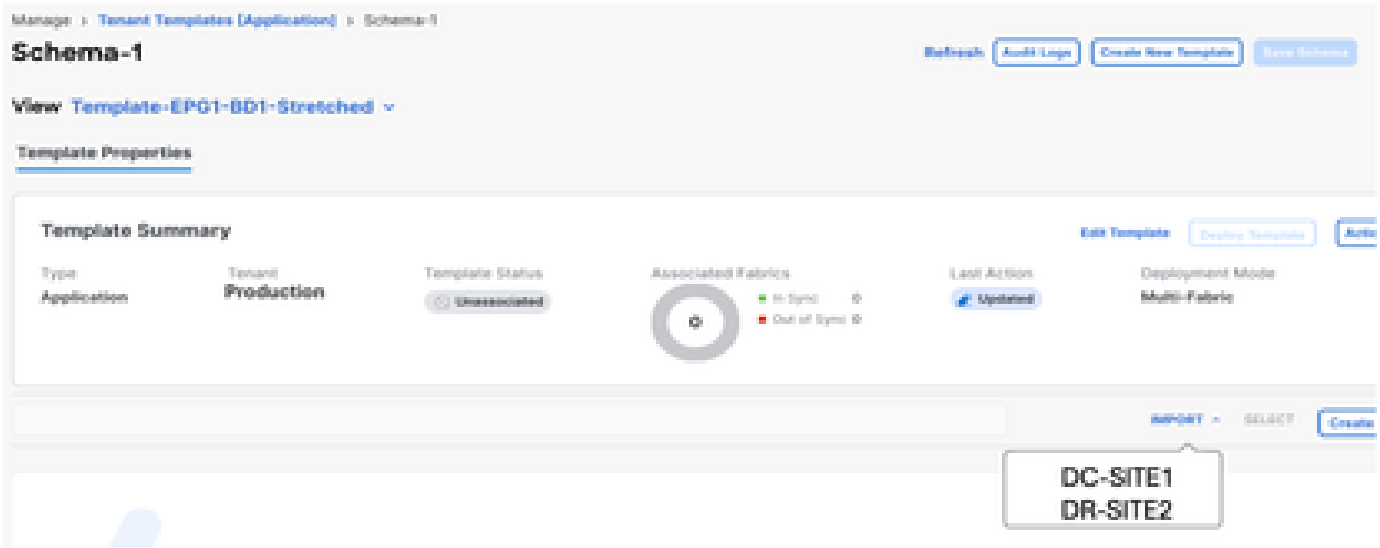


图25：从DC-SITE1中选择DC-EPG1-WEB

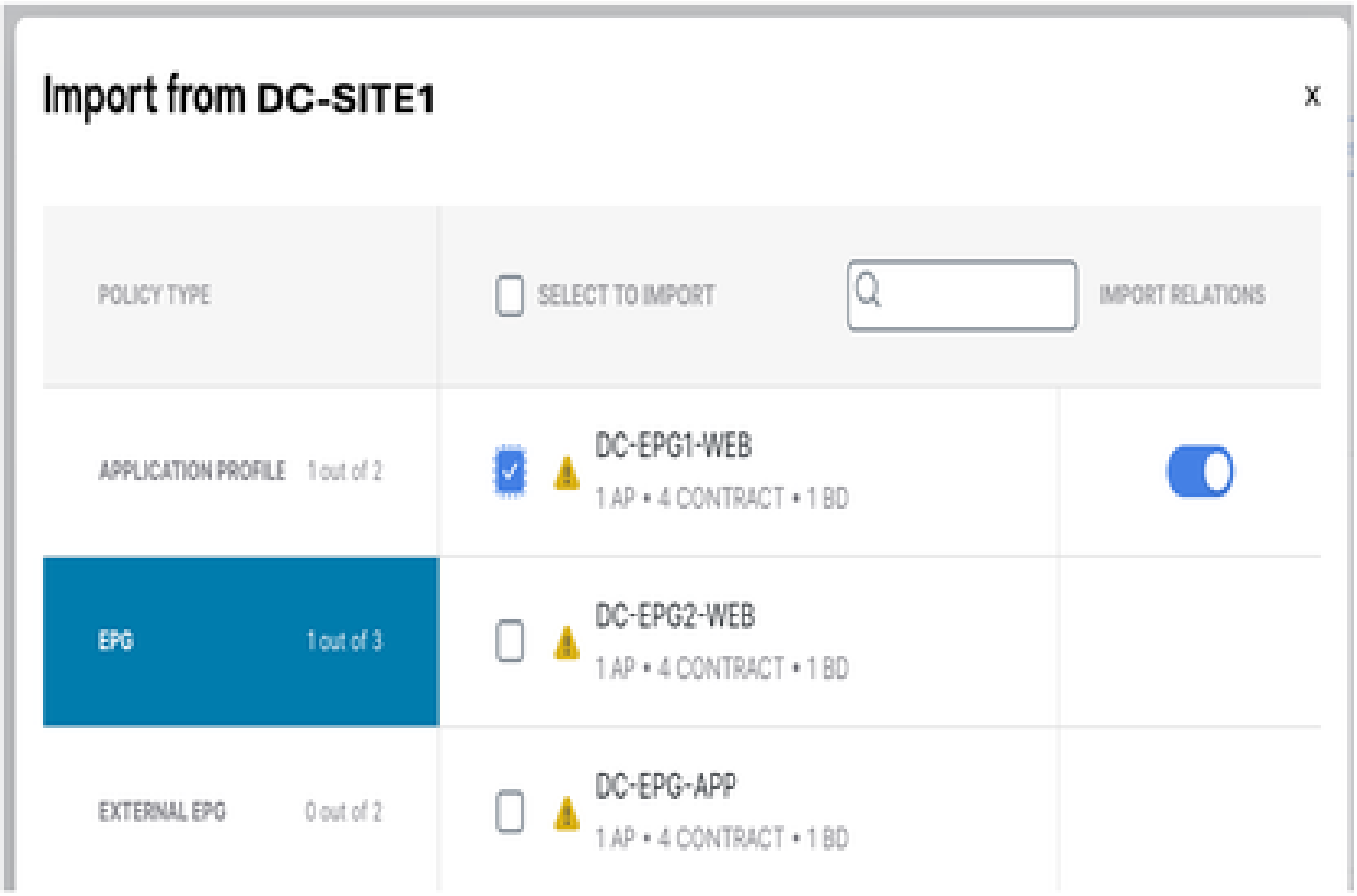
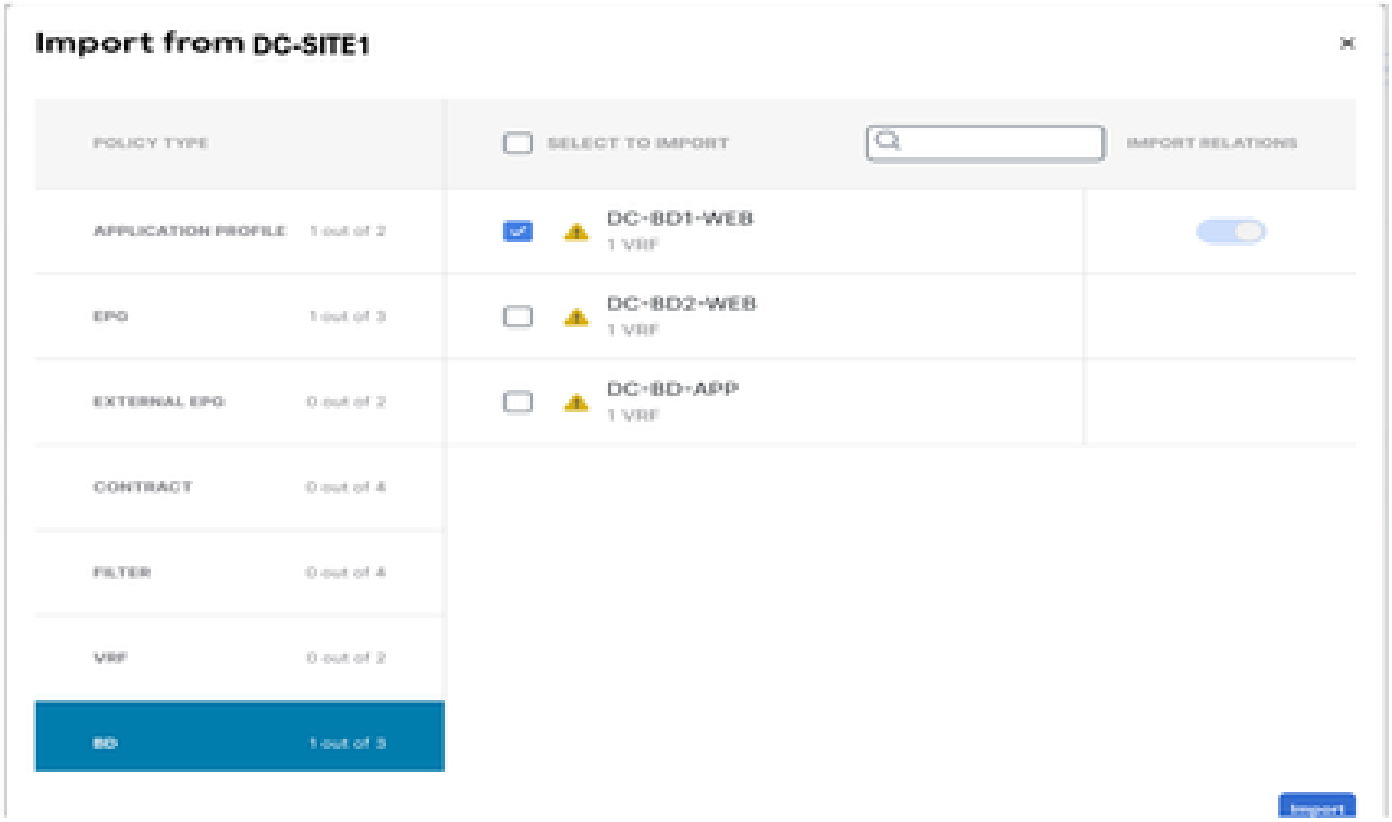


图26：从DC-SITE1中选择DC-BD1-WEB

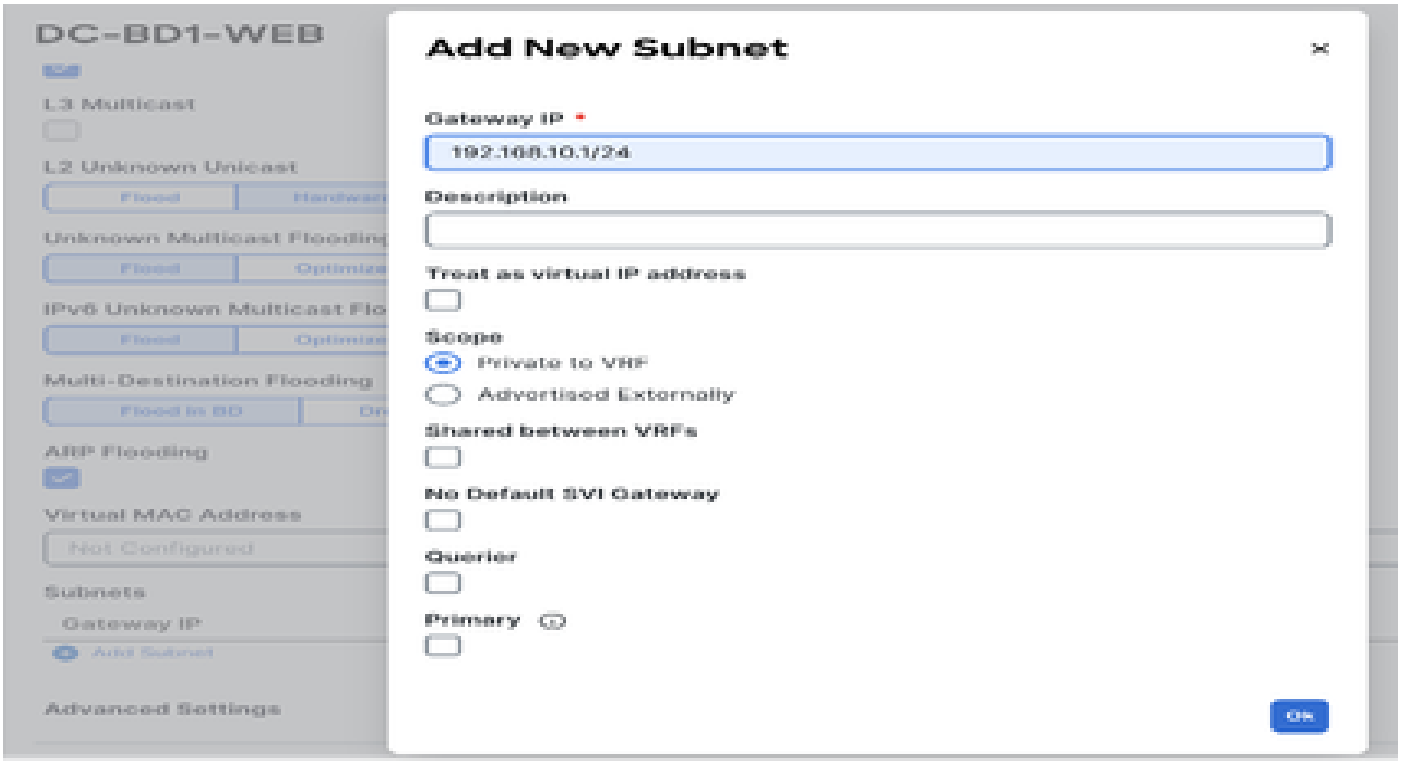


更改Template-EPG1-BD1-Longed中的BD设置

在DC-BD1-WEB设置中启用L2 Stretch并添加网关IP地址。此模板用于跨站点和在DC-SITE1和DR-SITE2中配置的任播网关延伸BD。

图 27：在DC-BD1-WEB中选择L2 Stretch

图 28：添加网关IP/子网



部署模板 — EPG1-BD1-Longed

点击Deploy Template-EPG1-BD1-Loaded并选择DC-SITE1和DR-SITE2

图29:将交换矩阵添加到Template-EPG1-BD1-Extended

图 30：部署外部同步模板

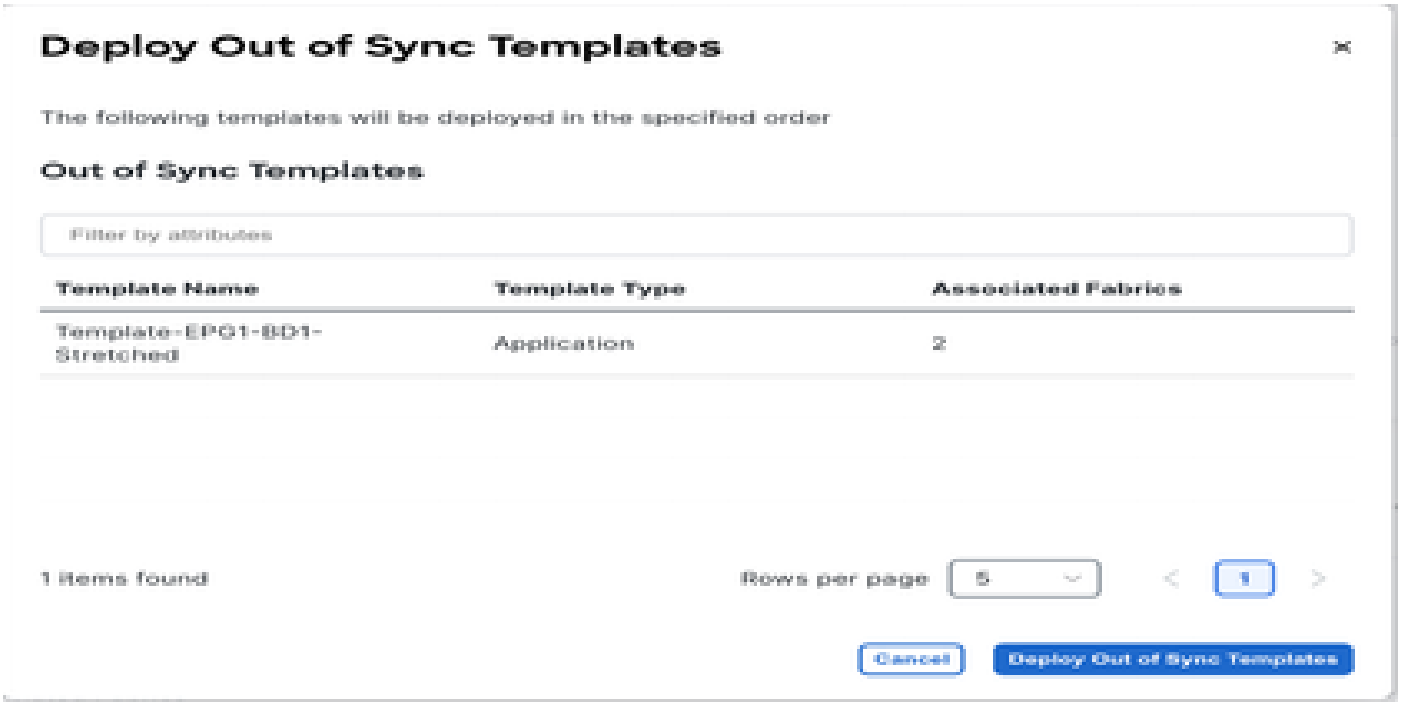
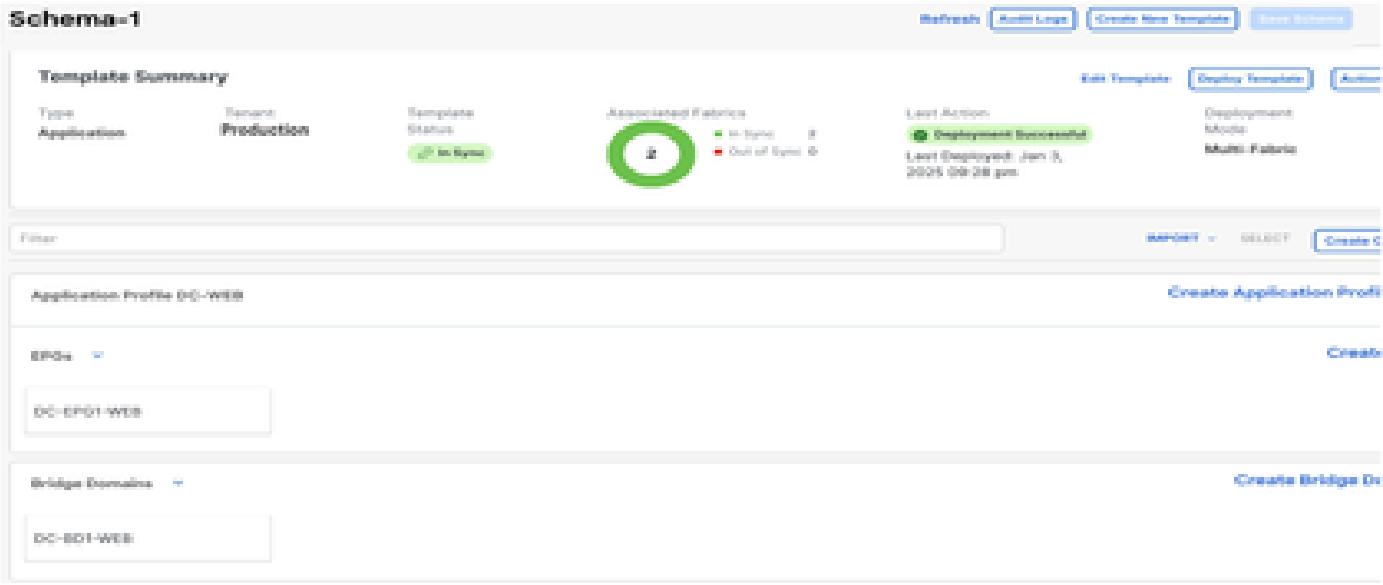


图 31：已完成部署



将DC-EP-1从DC-SITE1迁移到DR-SITE2

在DC-EPG1-WEB的DR-SITE2中配置静态绑定并关联DR-SITE2物理域。将DC-EP-1从DC-SITE1迁移到DR-SITE2。

图 32：DC-SITE1当前学习的DC-EP-1

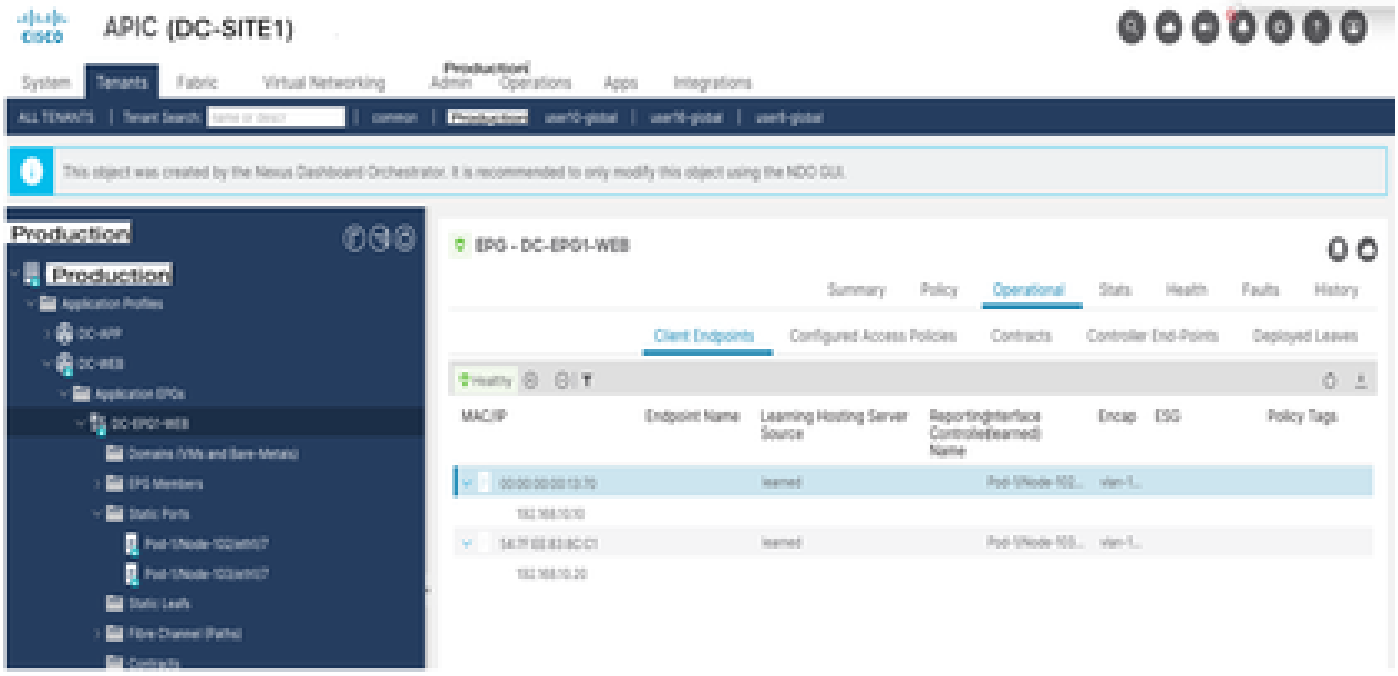


图 33：从DC-SITE1删除的DC-EP-1

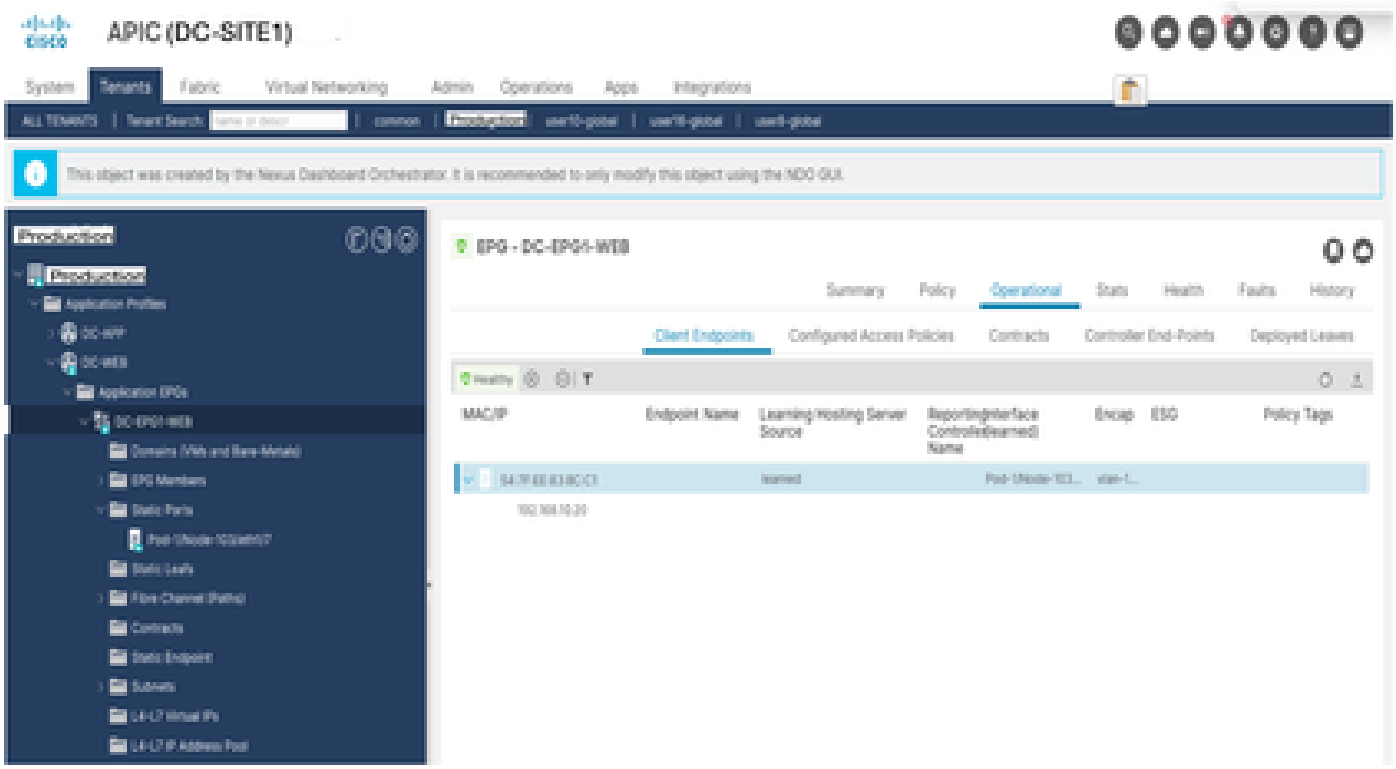


图 34：在DR-SITE2中添加物理域

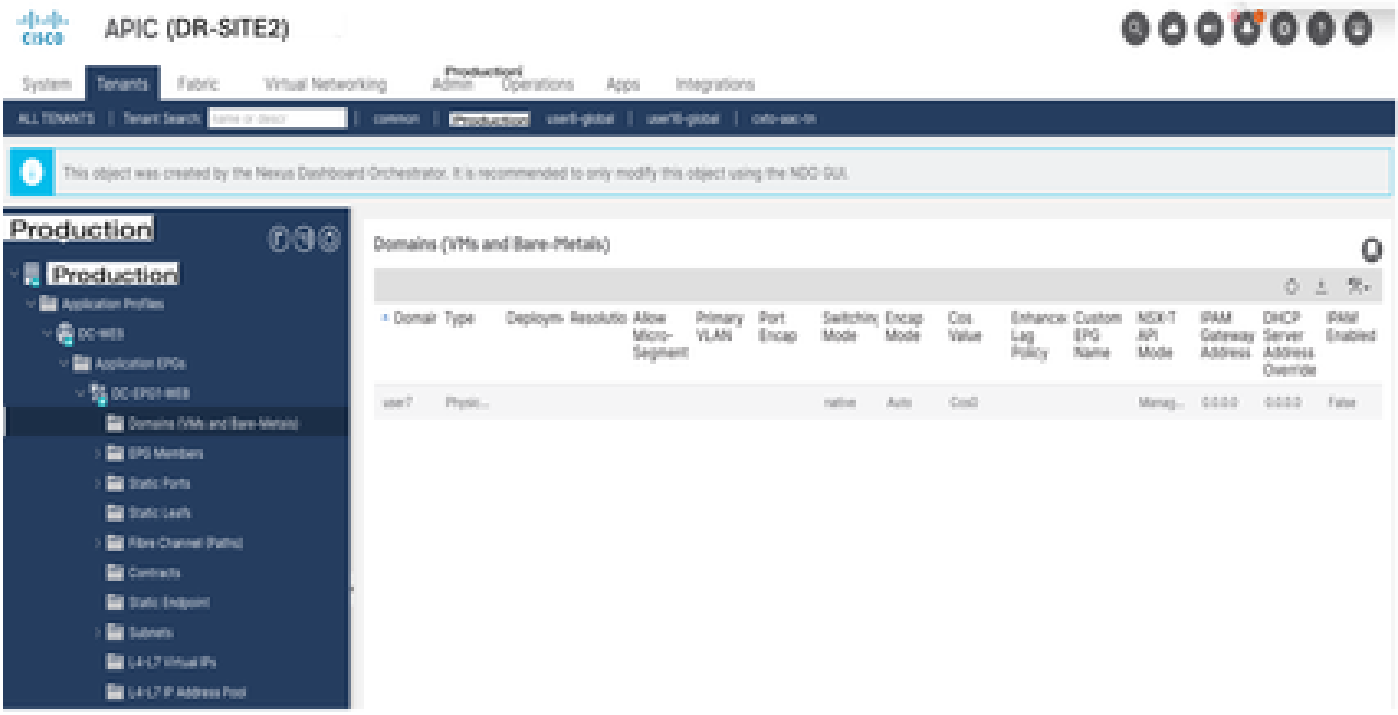


图 35：在DR-SITE2中添加静态绑定

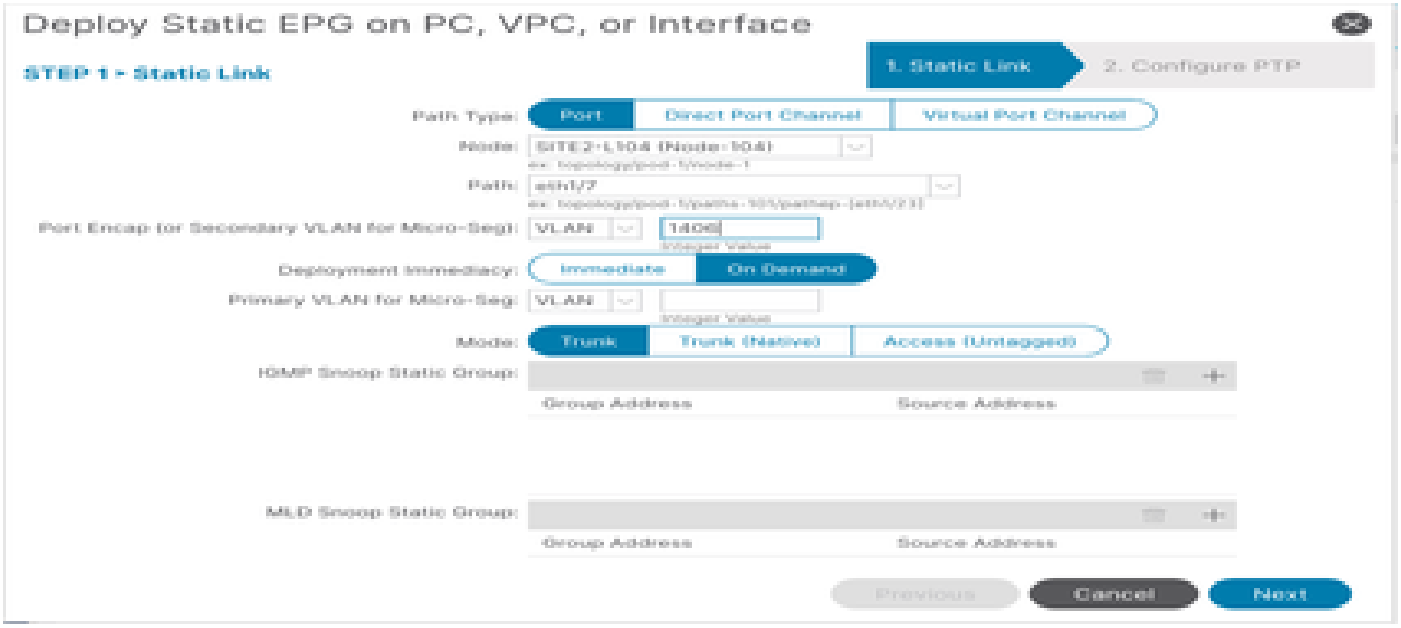
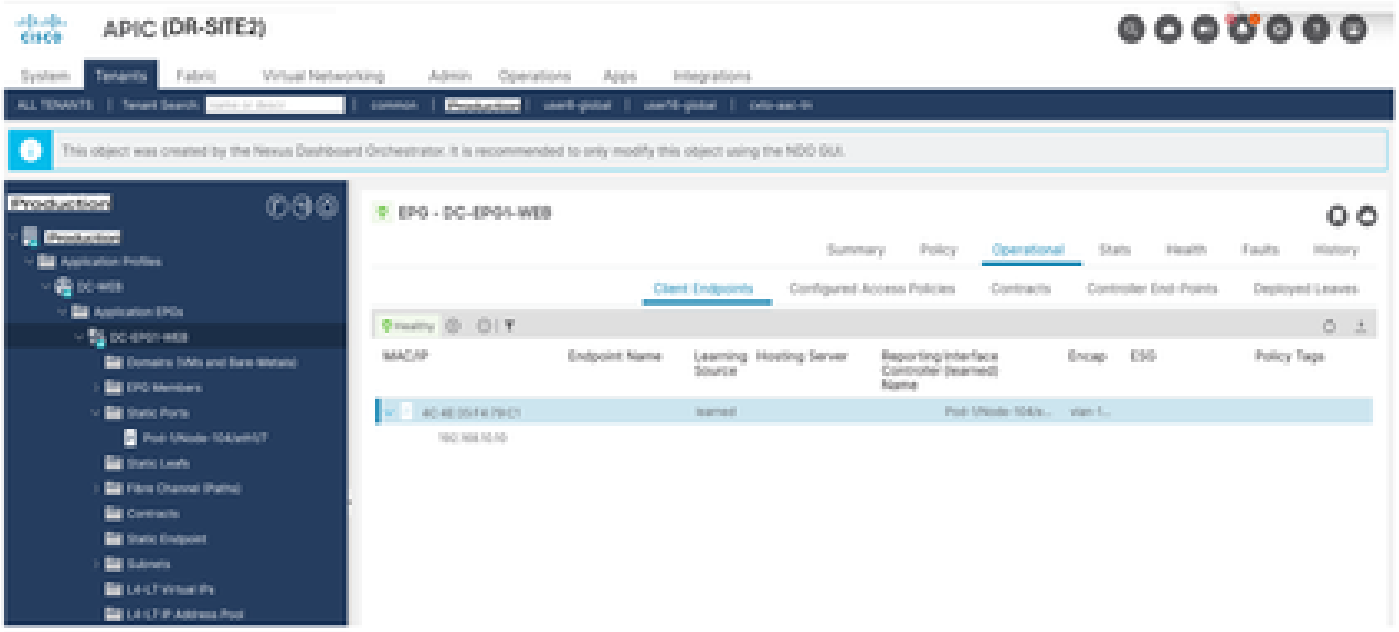


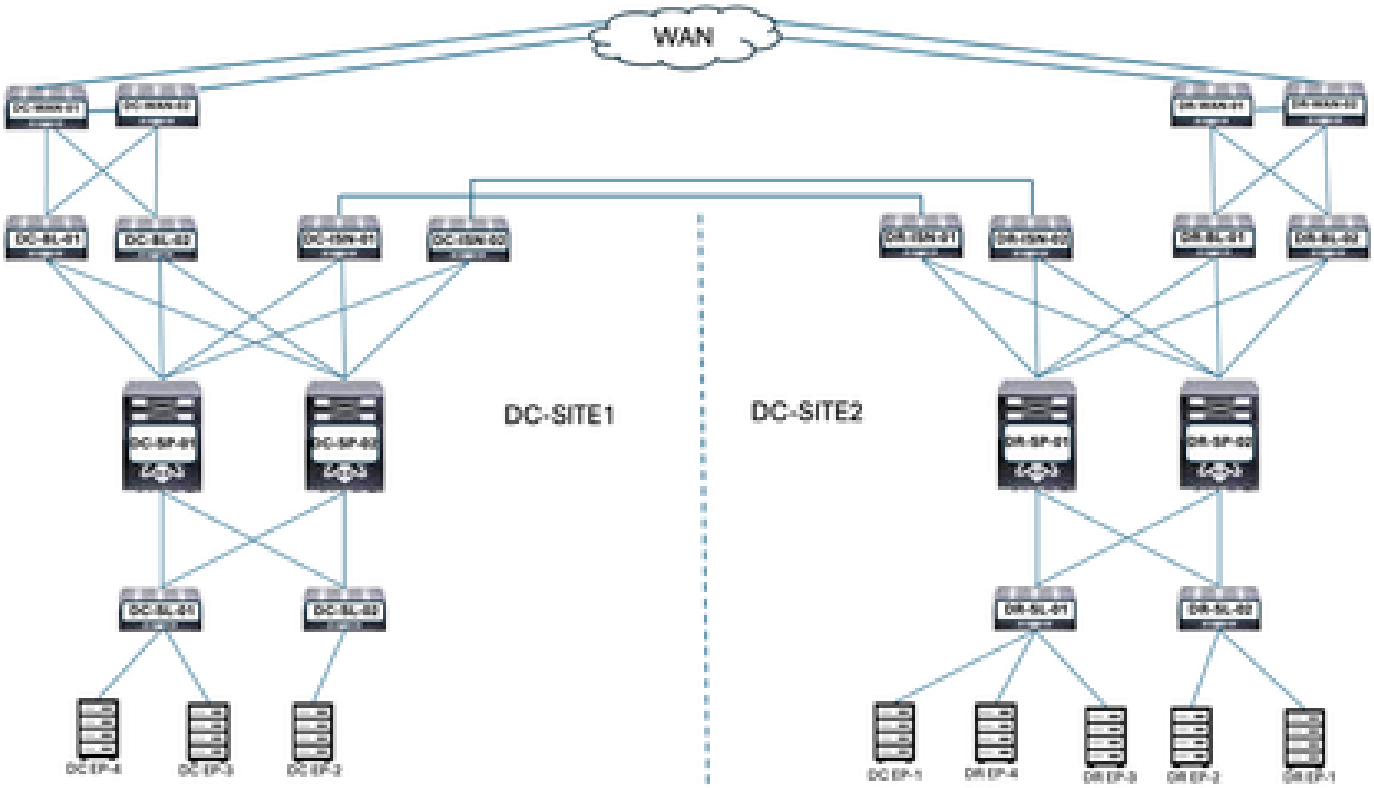
图 36：在DR-SITE2中学习的DC-EP-1



DC-EP-1迁移后的物理设计

DC-EP-1已连接到DR-SITE2服务器枝叶。

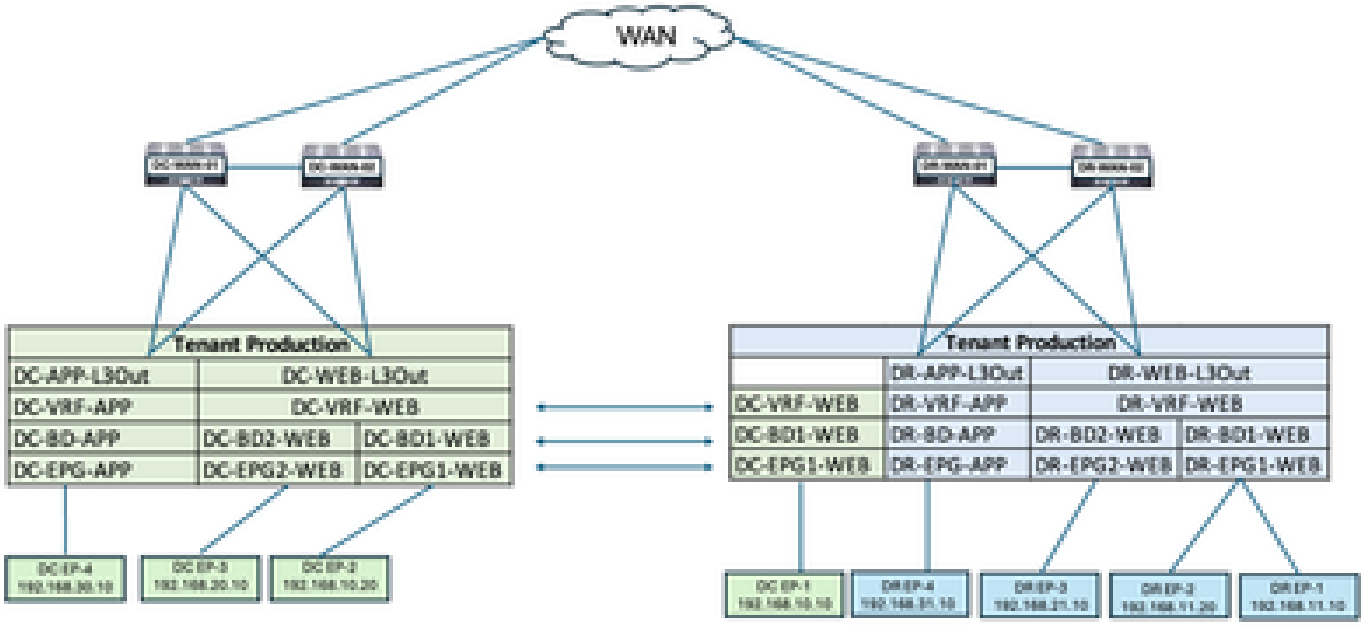
图 37：DC-EP-1迁移后的物理设计



DC-EP-1迁移后的逻辑设计

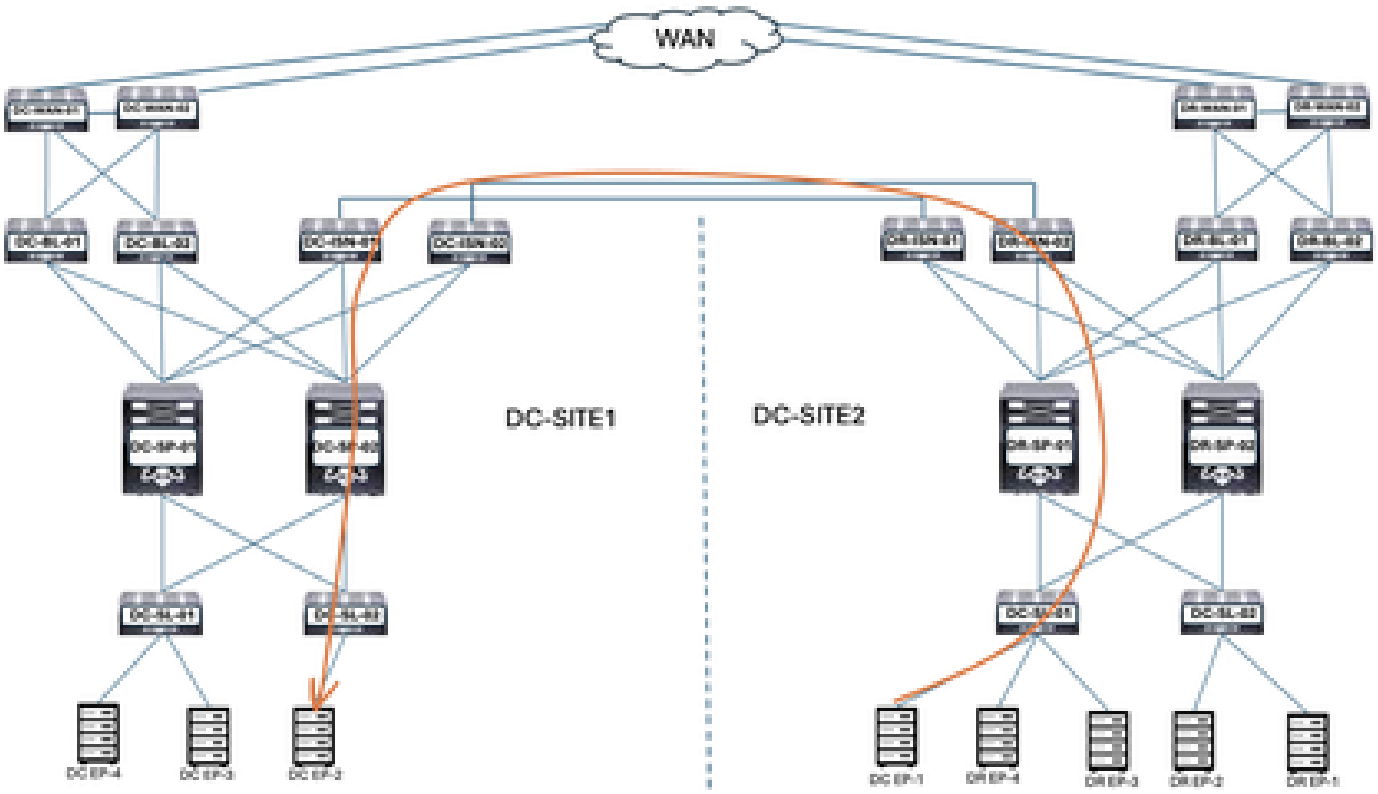
DC-EP-1已连接到DR-SITE2服务器枝叶。DC-EPG1-WEB、DC-BD1-WEB和DC-VRF-WEB在DC-SITE1和DR-SITE2之间延伸。

图 38：DC-EP-1迁移后的逻辑设计



DC-EP-1迁移后的EPG内流量

图 39：DC-EP-1迁移后的EPG内流量



DC-EP-1和DC-EP-2之间的通信是EPG内部通信，因为两个终端都属于DC-EPG1-WEB。此通信通过DC ISN进行，通过DR ISN多站点/重叠链路。

DC-EP-1和DC-EP-2之间的ping响应

图 40：DC-EP-1和DC-EP-2之间的ping响应

```
[redacted]# ping 192.168.10.20 source 192.168.10.10 vrf site-1
PING 192.168.10.20 (192.168.10.20) from 192.168.10.10: 56 data bytes
64 bytes from 192.168.10.20: icmp_seq=0 ttl=254 time=2.592 ms
64 bytes from 192.168.10.20: icmp_seq=1 ttl=254 time=1.931 ms
64 bytes from 192.168.10.20: icmp_seq=2 ttl=254 time=1.89 ms
64 bytes from 192.168.10.20: icmp_seq=3 ttl=254 time=2.063 ms
64 bytes from 192.168.10.20: icmp_seq=4 ttl=254 time=1.989 ms

--- 192.168.10.20 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.89/2.092/2.592 ms
```

从主干路由表

从DR-SP-01/DR-SP-02的DC-EP-1学习到DC-SP-01/DC-SP-02。

图 41：从主干路由表

DC-EP-1是在DC-SITE1-SP-01中从DR-SITE2-SP-01获取的

```
DC-SITE1-SP-01# show bgp l2vpn evpn vrf overlay-1

Route Distinguisher: 1:49905577
*>e[2]:[0]:[0]:[48]:[4c4e.35f4.79c1]:[0]:[0.0.0.0]/216
                     172.16.0.13                                0 65002 i
*>e[2]:[0]:[0]:[48]:[4c4e.35f4.79c1]:[32]:[192.168.10.10]/272
                     172.16.0.13                                0 65002 i
```

DR-SITE2-SP-01重叠单播TEP IP

```
DR-SITE2-SP-01# show ip int vrf overlay-1

lo5, Interface status: protocol-up/link-up/admin-up, iod: 86, mode: dci-ucast
  IP address: 172.16.0.13, IP subnet: 172.16.0.13/32
  IP broadcast address: 255.255.255.255
  IP primary address route-preference: 0, tag: 0
```

Template-EPG2-BD2-Site1创建

一旦DC-EPG2-WEB和DC-BD2-WEB成为Nexus控制面板协调器的一部分，DC-EP-1和DC-EP-3之间就会发生EPG间通信。

在架构1中创建了Template-EPG2-BD2-Site1。DC-SITE1已添加到与同一模板关联的模板和租户 — Production。这是特定于站点的模板。此模板用于导入Template-EPG2-BD2-Site1，用于DC-EP-1和DC-EP-3之间的通信。

DC-EP-1和DC-EP-3通信要求DC-EPG2-BD2必须是Nexus控制面板协调器的一部分。

图 42：DC-EP-1和DC-EP-3无法通信

```
[redacted]# ping 192.168.20.10 source 192.168.10.10 vrf site-1
PING 192.168.20.10 (192.168.20.10) from 192.168.10.10: 56 data bytes
Request 0 timed out
Request 1 timed out
Request 2 timed out
Request 3 timed out
Request 4 timed out

--- 192.168.20.10 ping statistics ---
5 packets transmitted, 0 packets received, 100.00% packet loss
```

图 43：添加应用模板 — 选择ACI多云

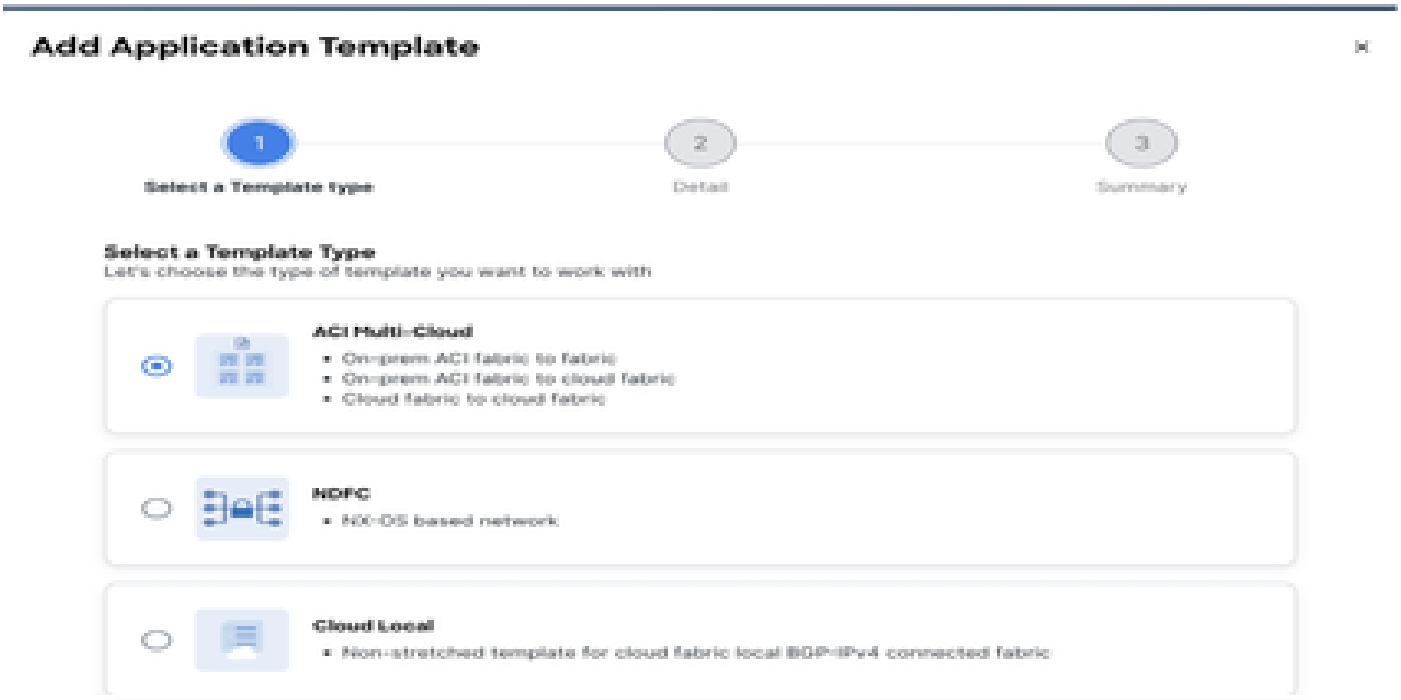


图 44：添加模板名称Template-EPG2-BD2-Site1，选择租户生产

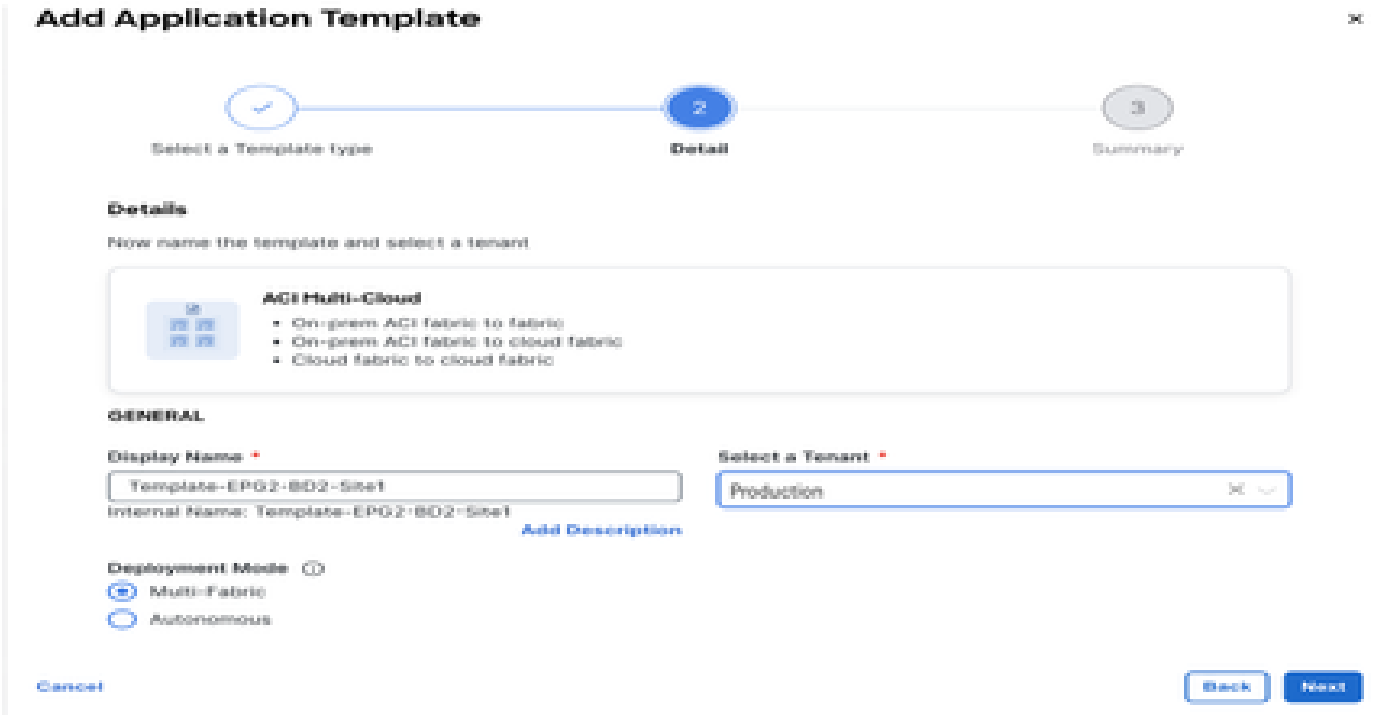
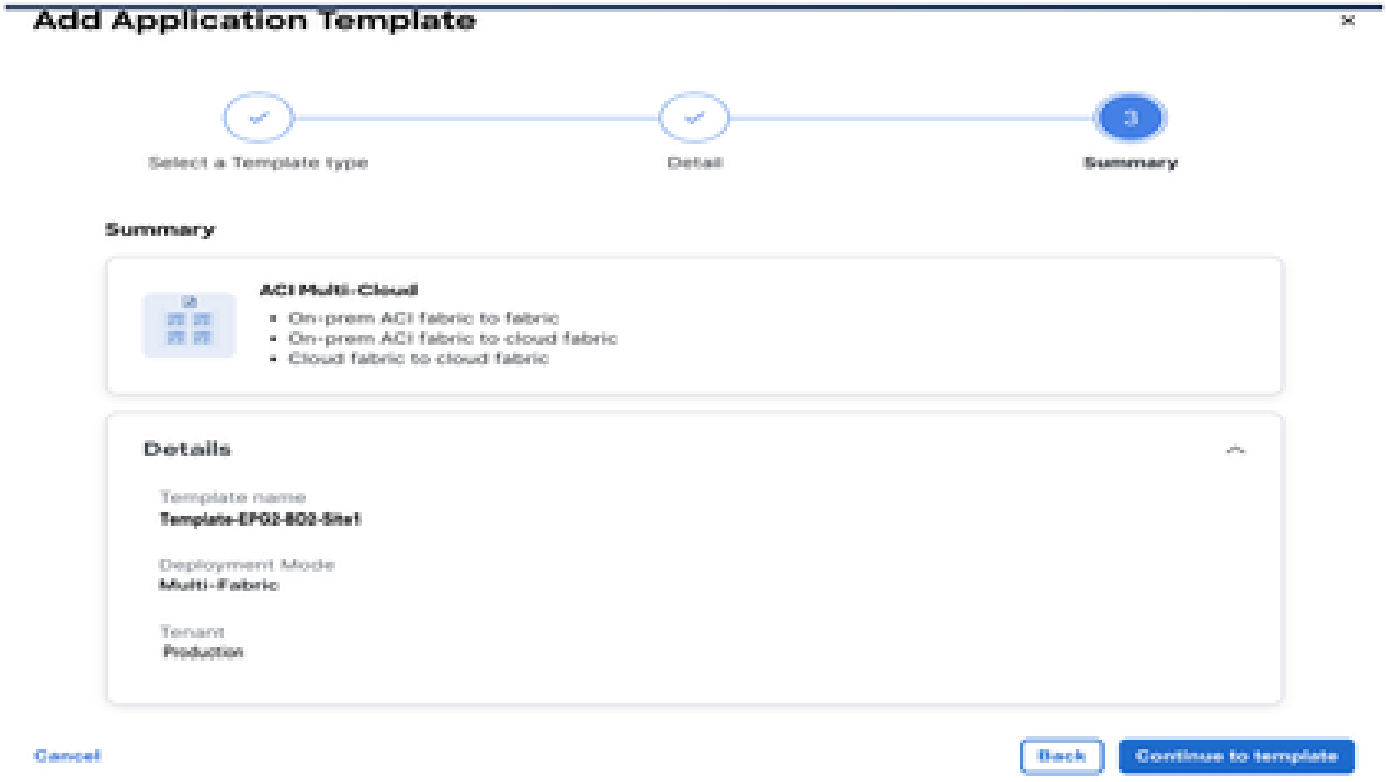


图 45：Template-EPG2-BD2-Site1详细信息



在Template-EPG2-BD2-Site1中导入EPG2-BD2

从DC-SITE1导入DC-EPG2-WEB和DC-BD2-WEB。

图 46：点击Import并选择DC-SITE1

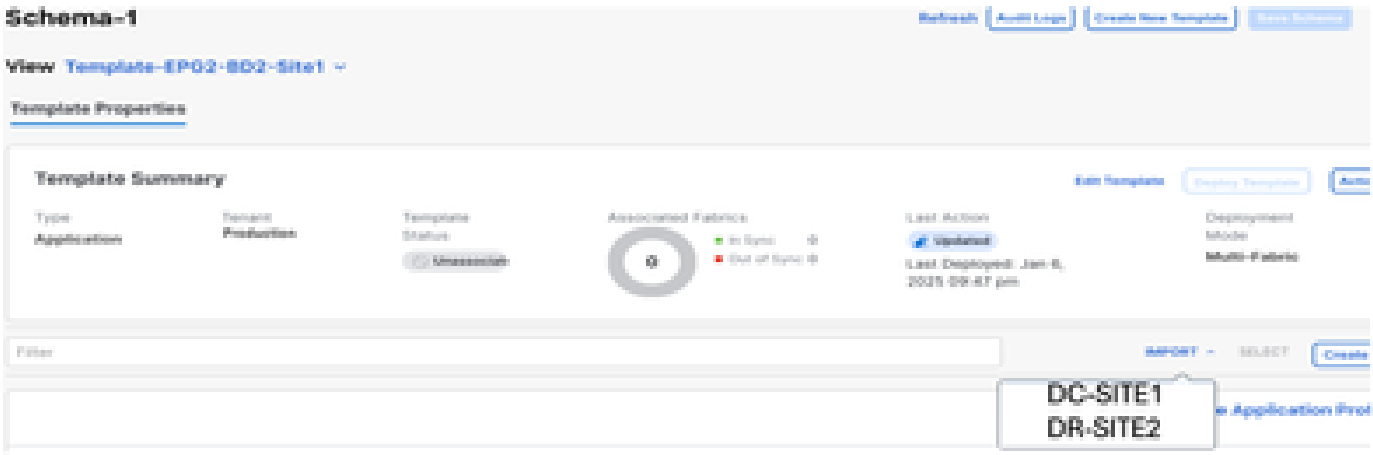


图47：从DC-SITE1中选择DC-EPG2-WEB

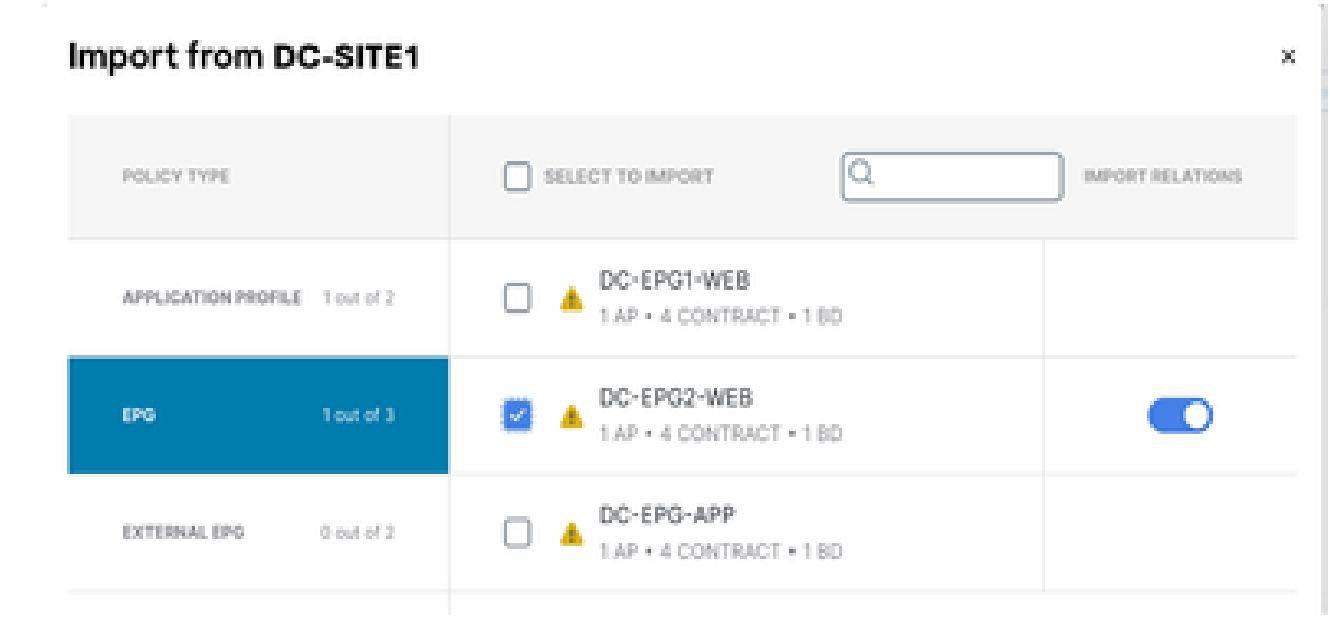


图48：从DC-SITE1中选择DC-BD2-WEB

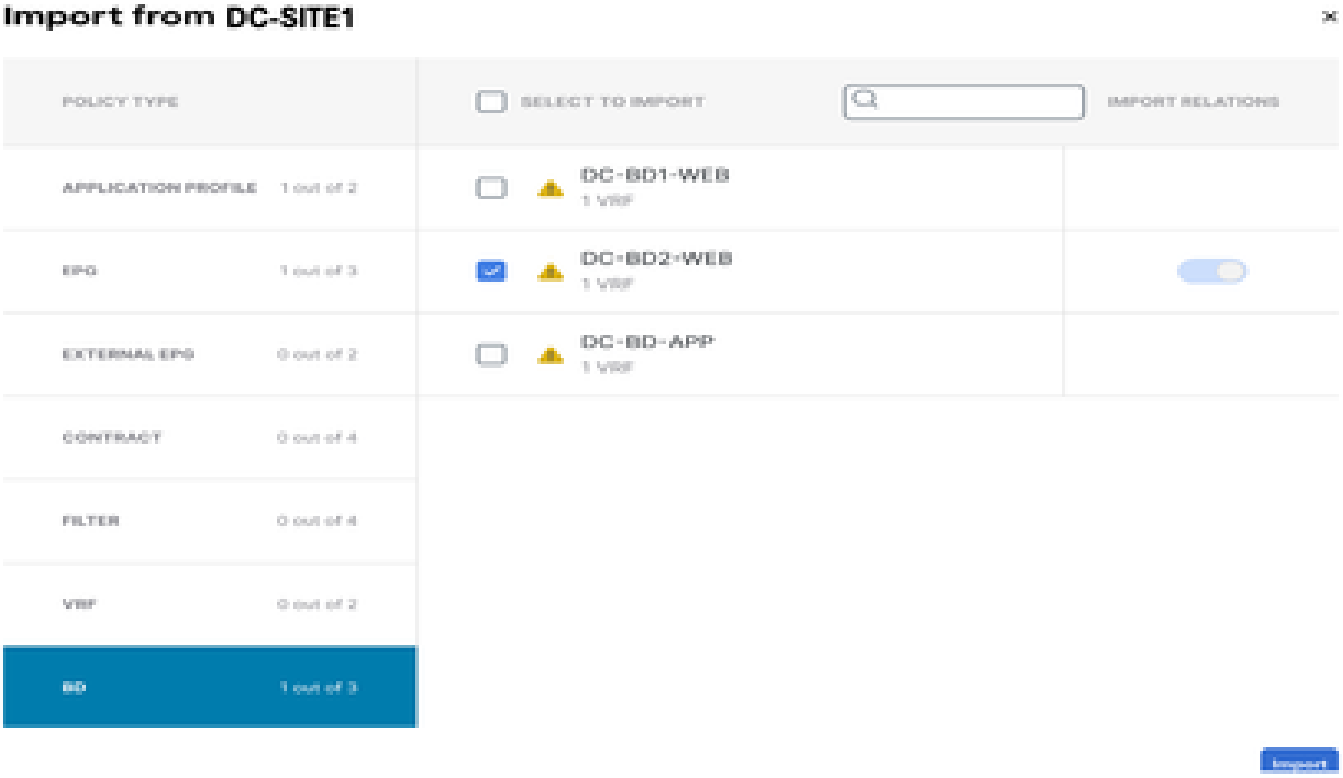
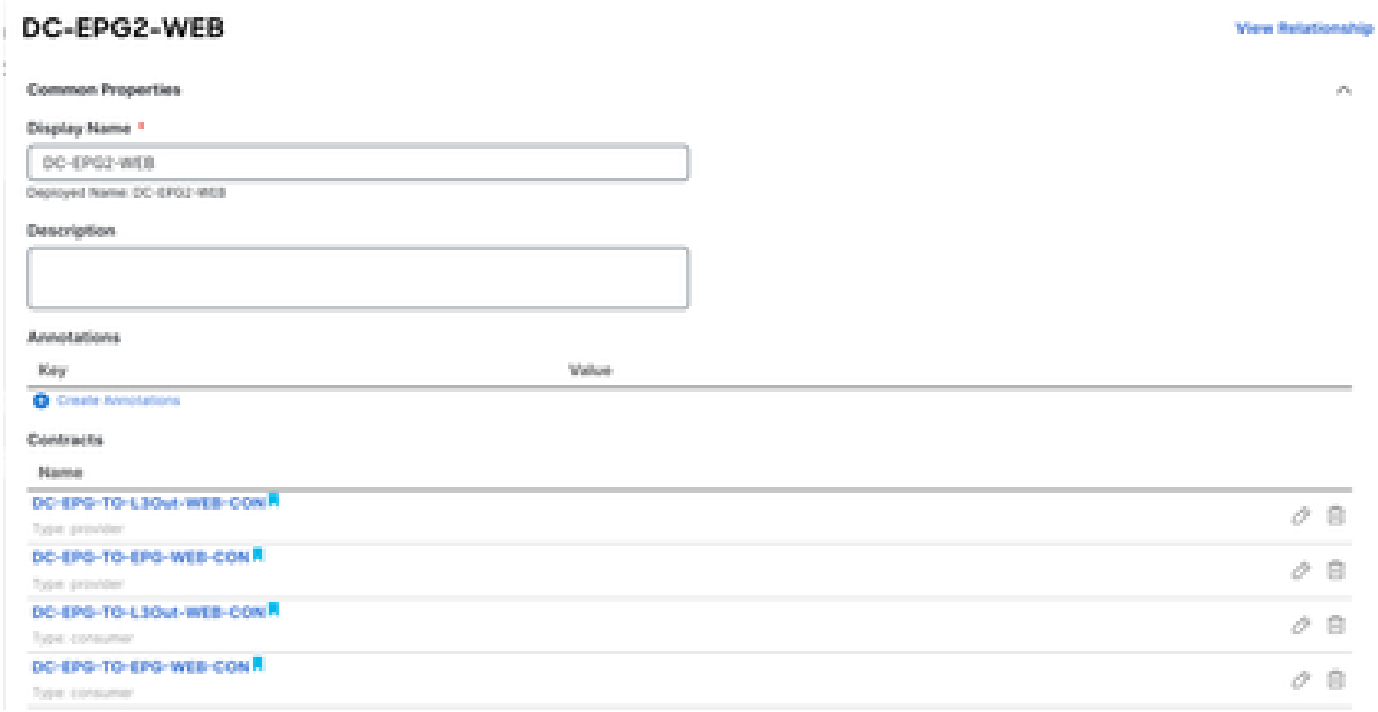


图 49：导入与DC-EPG2-WEB关联的合同



部署模板 — EPG2-BD2-Site1

点击Deploy Template-EPG2-BD2-Site1并选择DC-SITE1

图50:将交换矩阵添加到模板 — EPG2-BD2-Site1

图 51：部署外部同步模板

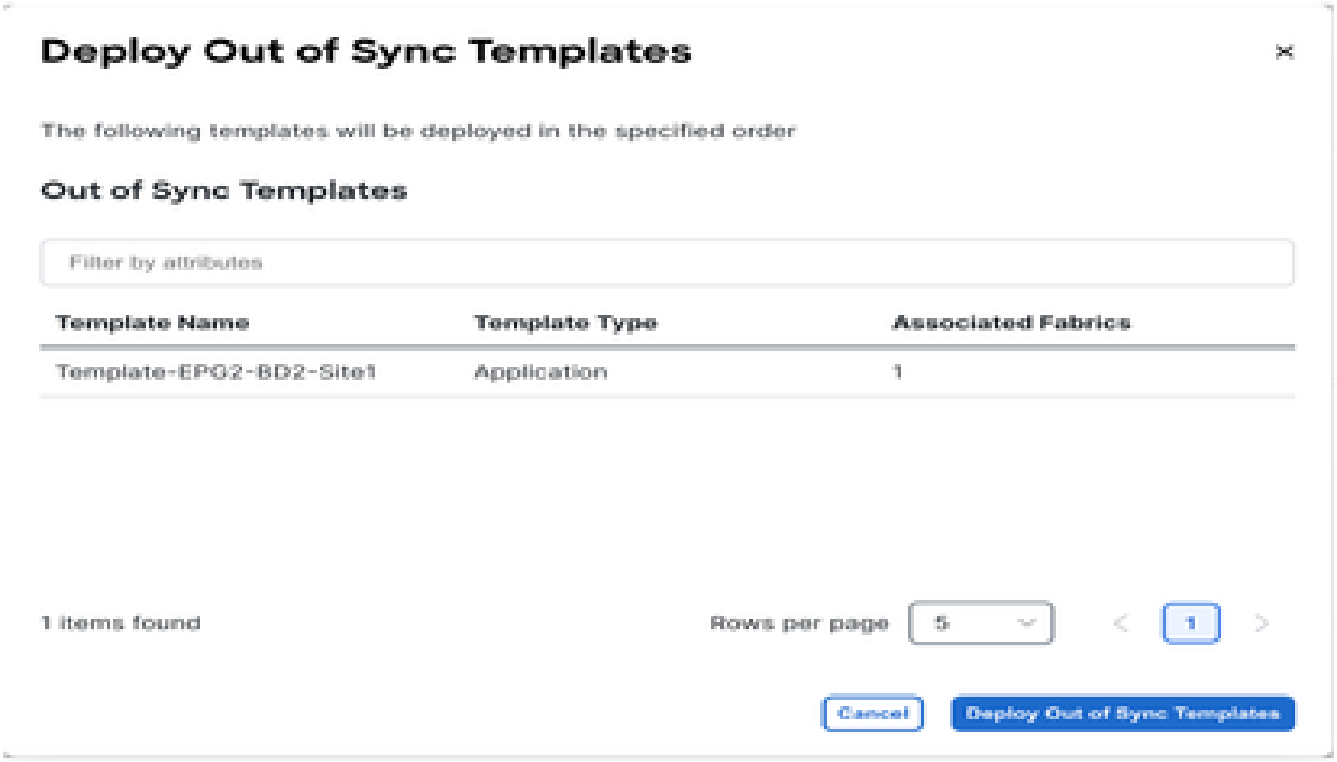


图 52：已完成部署

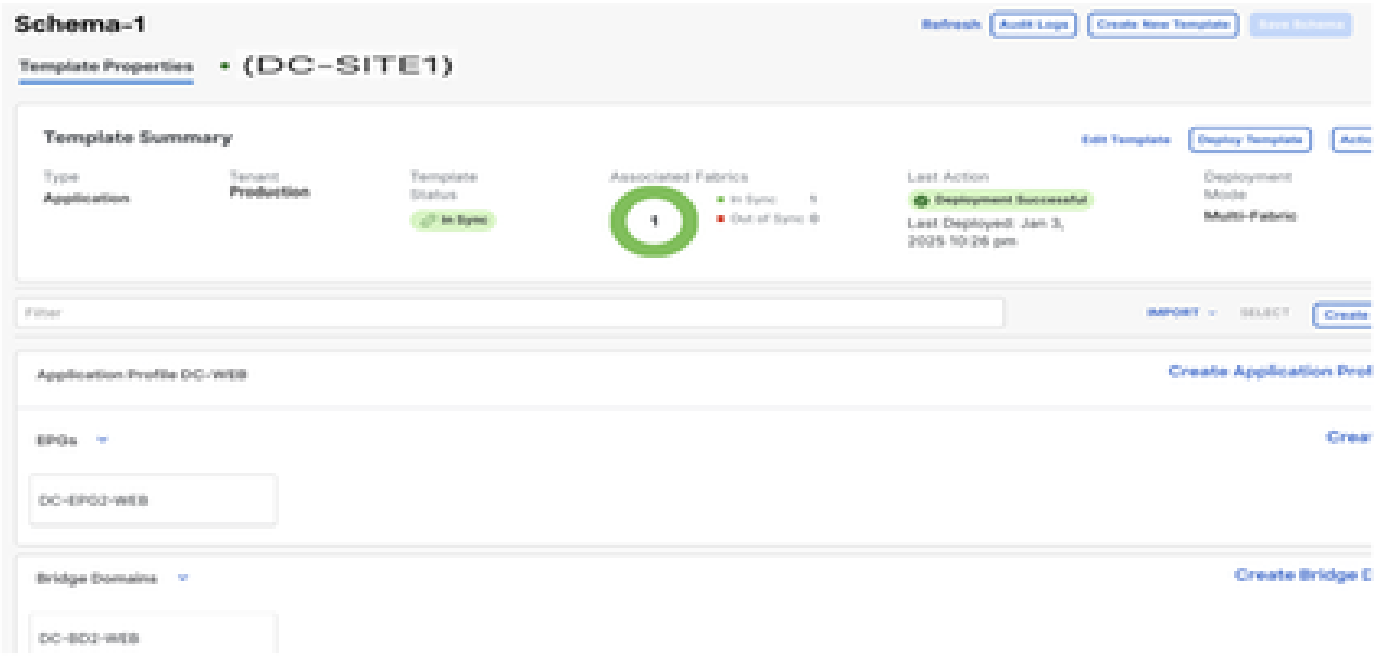
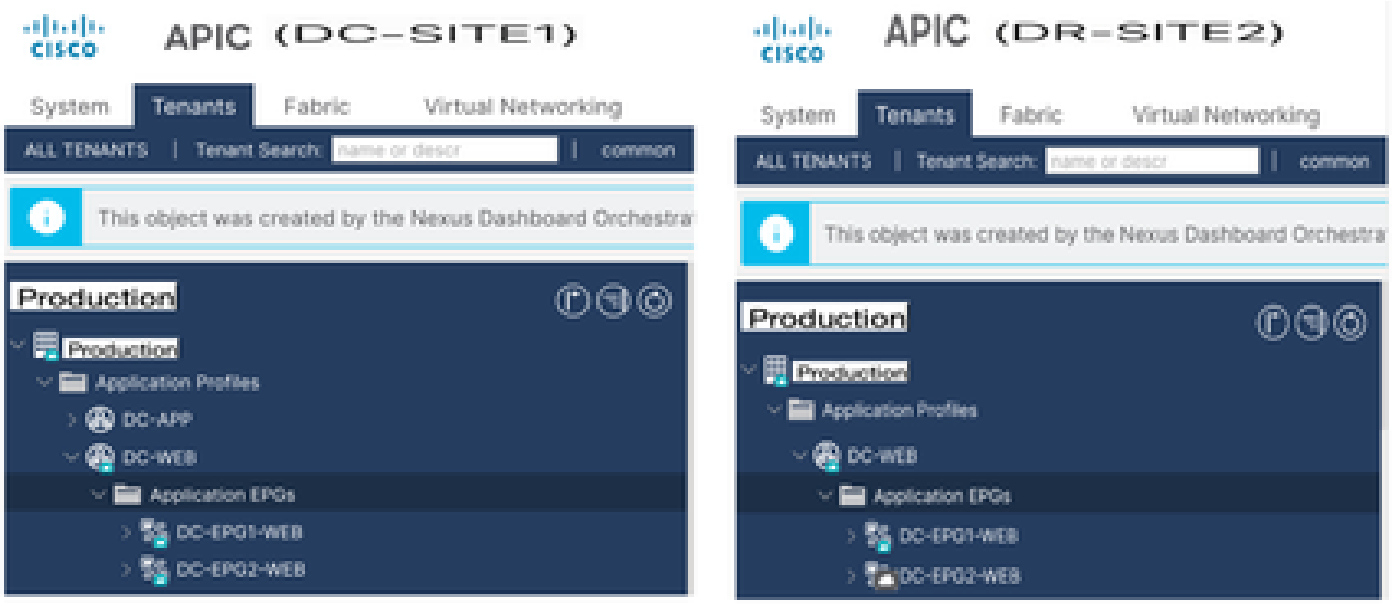


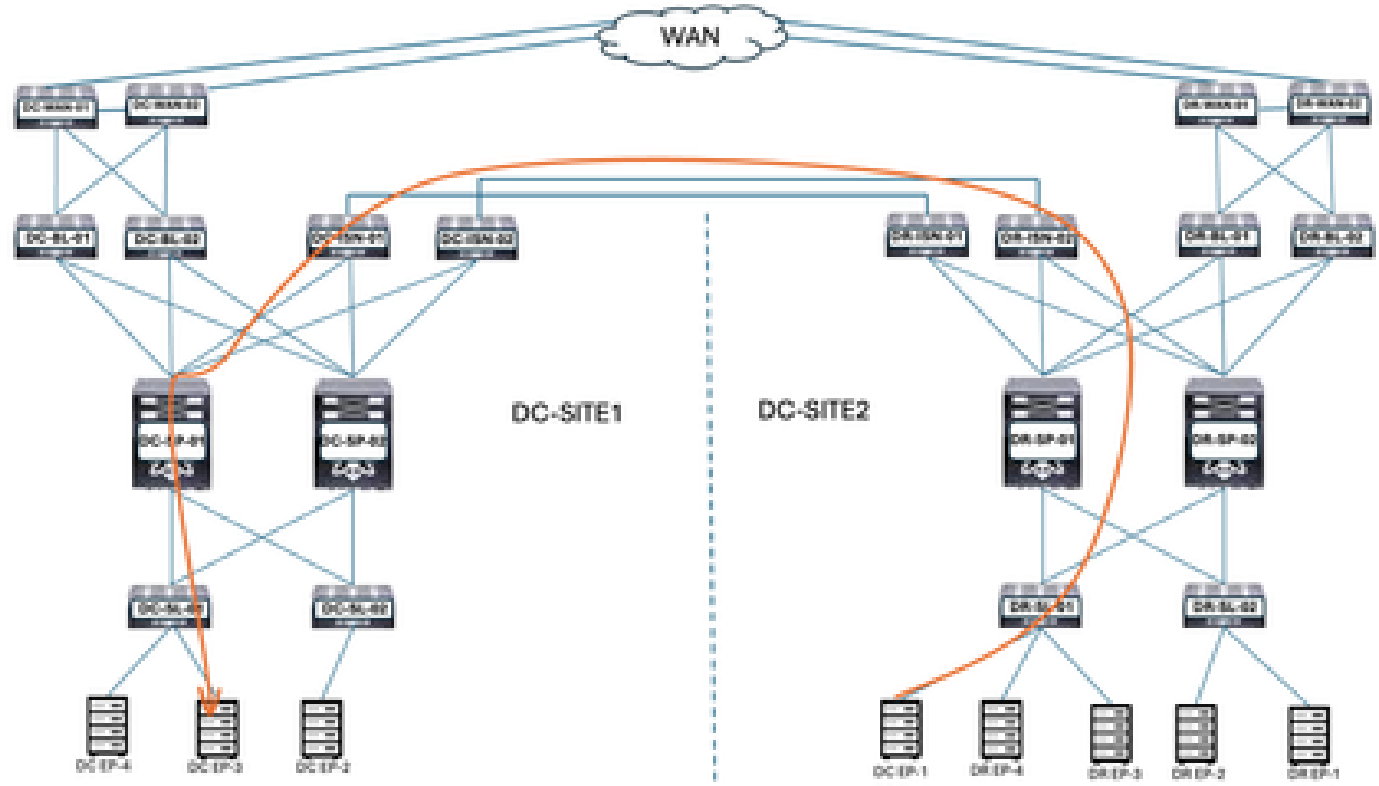
图 53：DC-EPG2-WEB部署在两个站点

在DR-SITE2中创建的DC-EPG2-WEB的影子EPG



EP-1迁移后的EPG间流量

图 54：EP-1迁移后的EPG间流量



DC-EP-1和DC-EP-3之间的通信是EPG间通信，因为两个终端分别属于DC-EPG1-WEB和DC-EPG2-WEB。此通信通过DC ISN进行，以进行DR ISN多站点/重叠链路。

DC-EP-1和DC-EP-3之间的ping响应

图 55：DC-EP-1和DC-EP-3之间的ping响应

```
[redacted]# ping 192.168.20.10 source 192.168.10.10 vrf site-1
PING 192.168.20.10 (192.168.20.10) from 192.168.10.10: 56 data bytes
64 bytes from 192.168.20.10: icmp_seq=0 ttl=252 time=1.498 ms
64 bytes from 192.168.20.10: icmp_seq=1 ttl=252 time=1.255 ms
64 bytes from 192.168.20.10: icmp_seq=2 ttl=252 time=1.129 ms
64 bytes from 192.168.20.10: icmp_seq=3 ttl=252 time=1.084 ms
64 bytes from 192.168.20.10: icmp_seq=4 ttl=252 time=1.537 ms

--- 192.168.20.10 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.084/1.3/1.537 ms
```

Template-WEB-L3Out-Site1创建

在架构1内创建了Template-Web-L3Out-Site1。DC-SITE1已添加到模板，并与同一模板关联的租户生产。这是特定于站点的模板。此模板用于DC-EP-1 VRF间和DC间通信。

图 56：添加应用模板 — 选择ACI多云

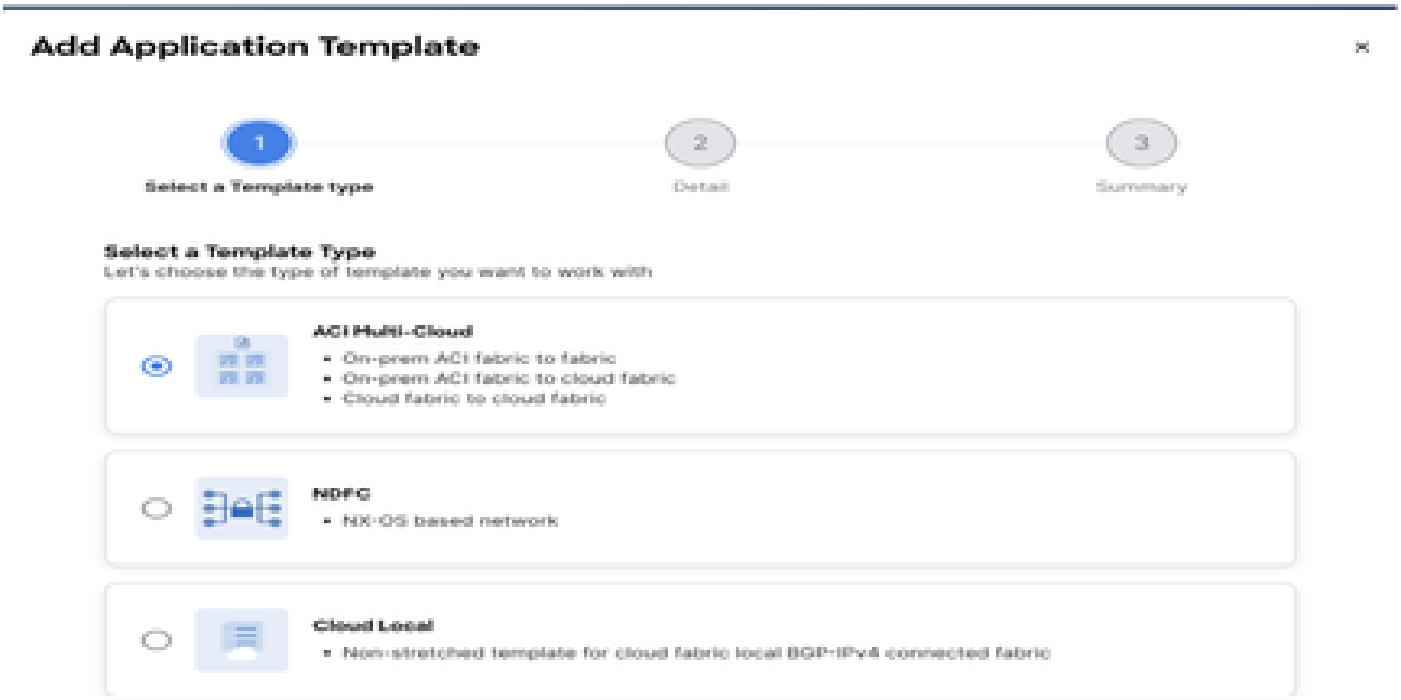


Figure 57:添加模板名称Template-WEB-L3Out-Site1，选择租户生产

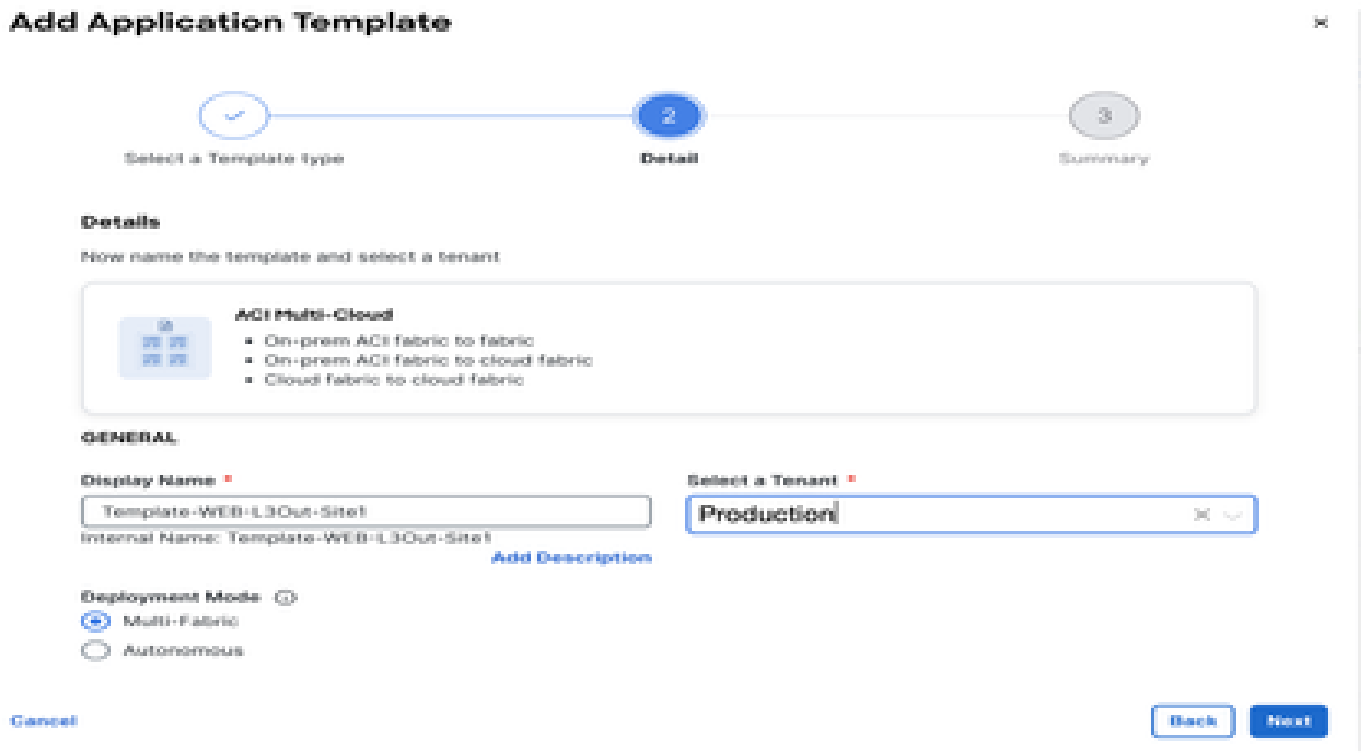
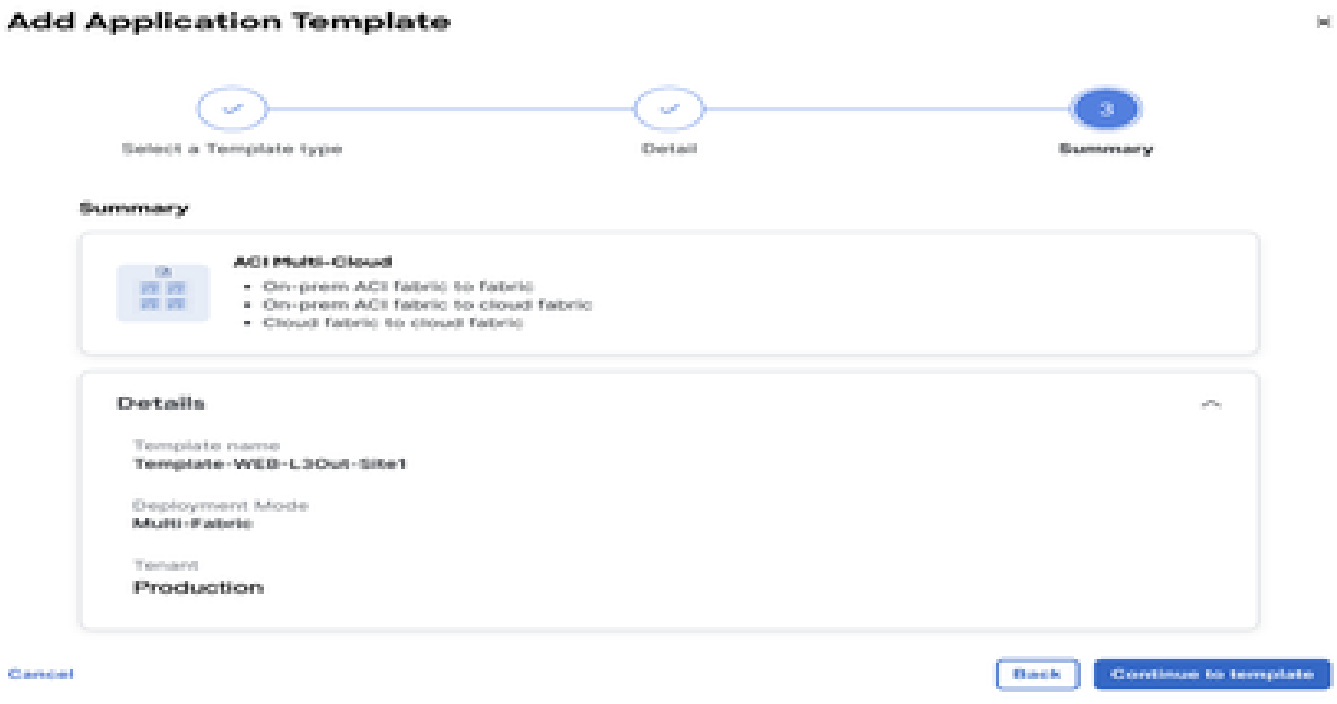


Figure 58:Template-WEB-L3Out-Site1详细信息



在Template-WEB-L3Out-Site1中导入外部EPG和L3Out

在Template-WEB-L3Out-Site1中导入外部EPG和L3Out

图 59：点击Import并选择DC-SITE1

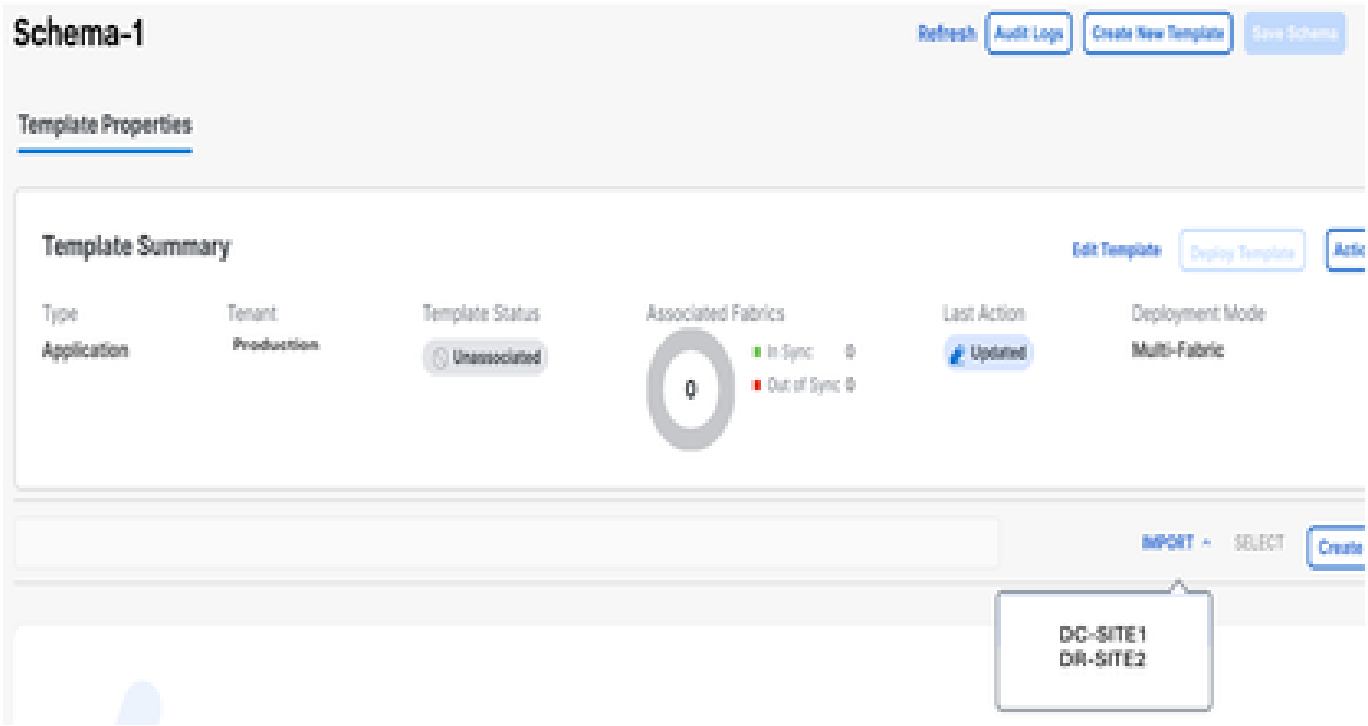


图60:从DC-SITE1选择EXT-APP-EPG

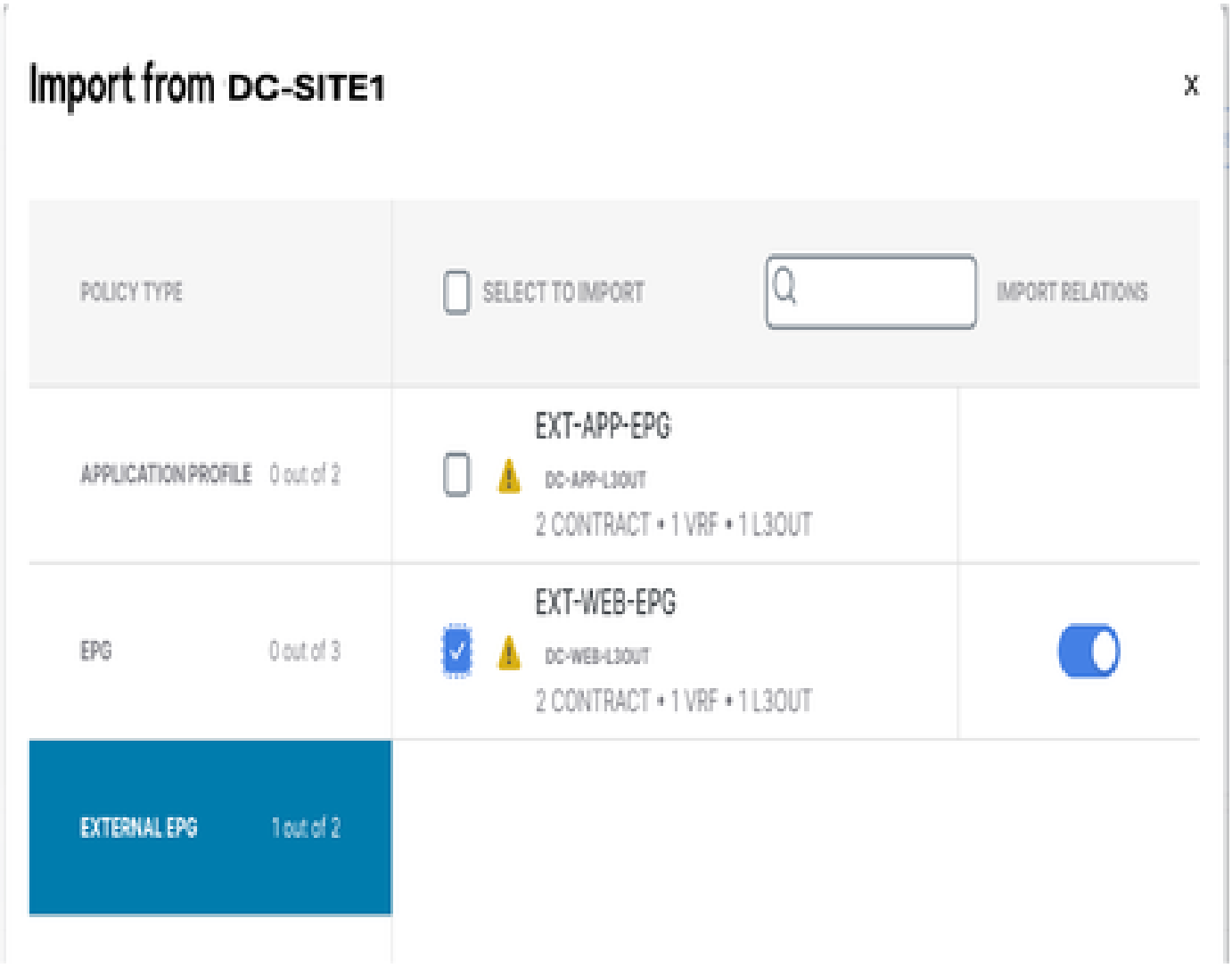


Figure 61：从DC-SITE1中选择DC-APP-L3Out

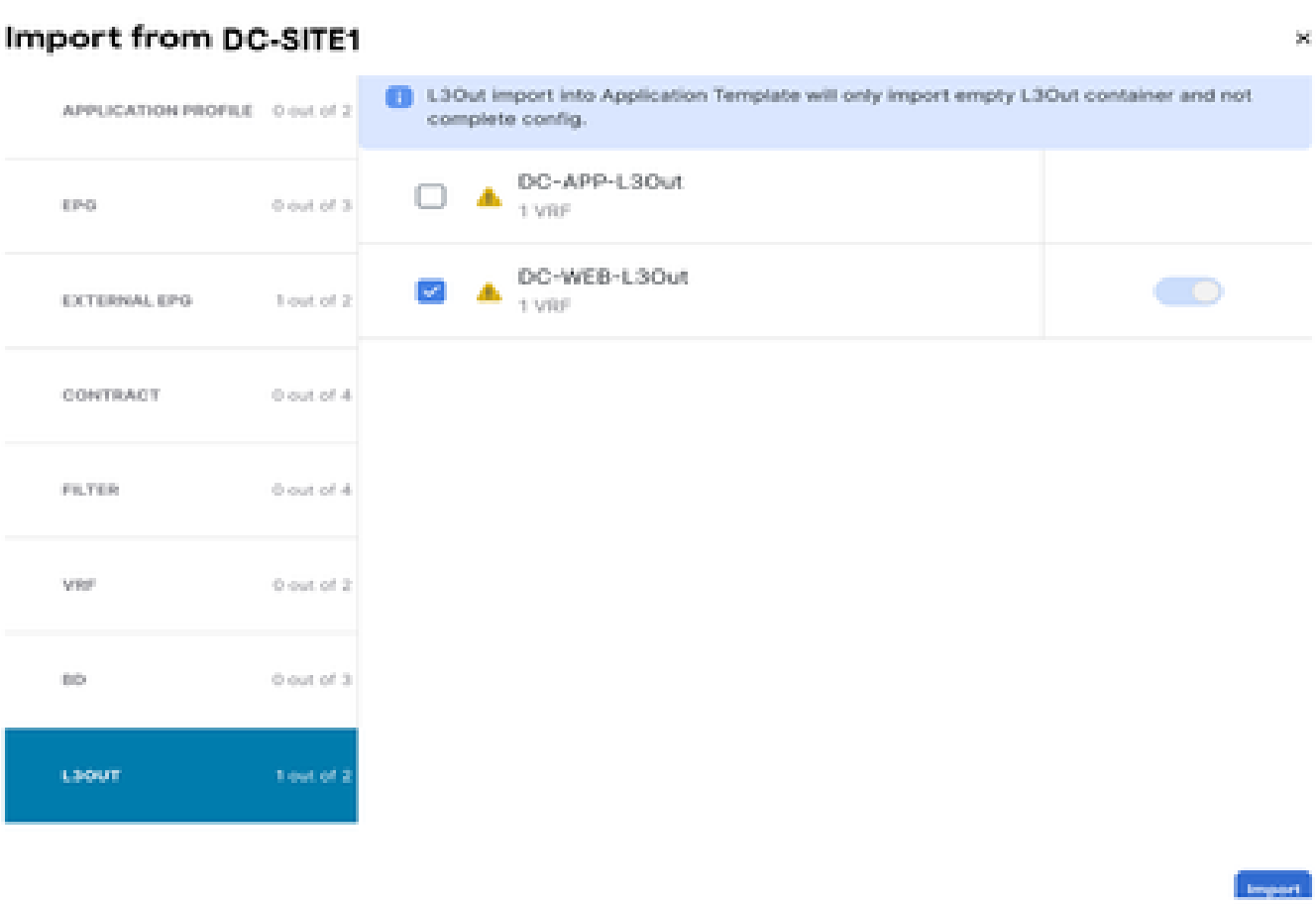
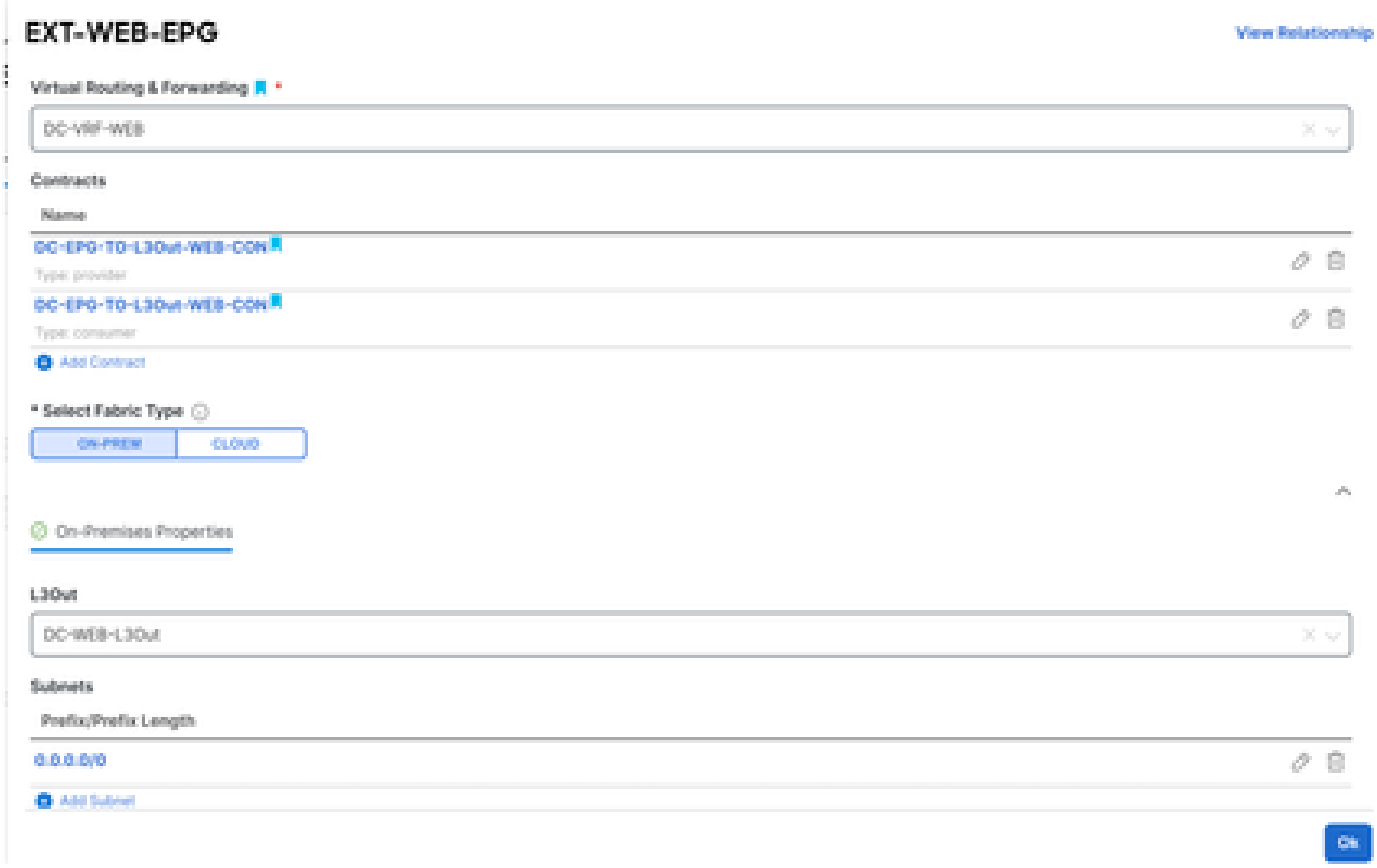


Figure 62:导入与EXT-WEB-EPG关联的合同

在DR-SITE2中创建的EXT-WEB-EPG与应用的DC合同的阴影。



部署模板 — WEB-L3Out-Site1

点击Deploy Template-WEB-L3Out-Site1并选择DC-SITE1

Figure 63:将交换矩阵添加到Template-WEB-L3Out-Site1

图64:部署同步模板

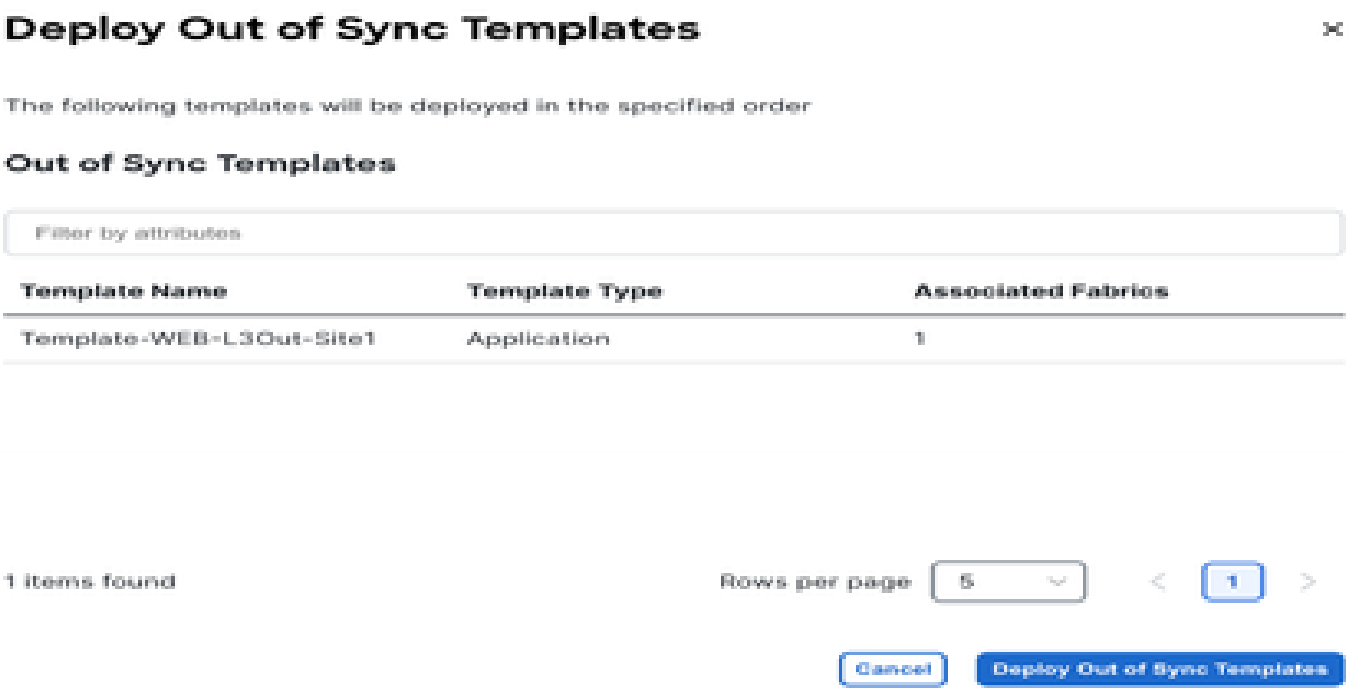
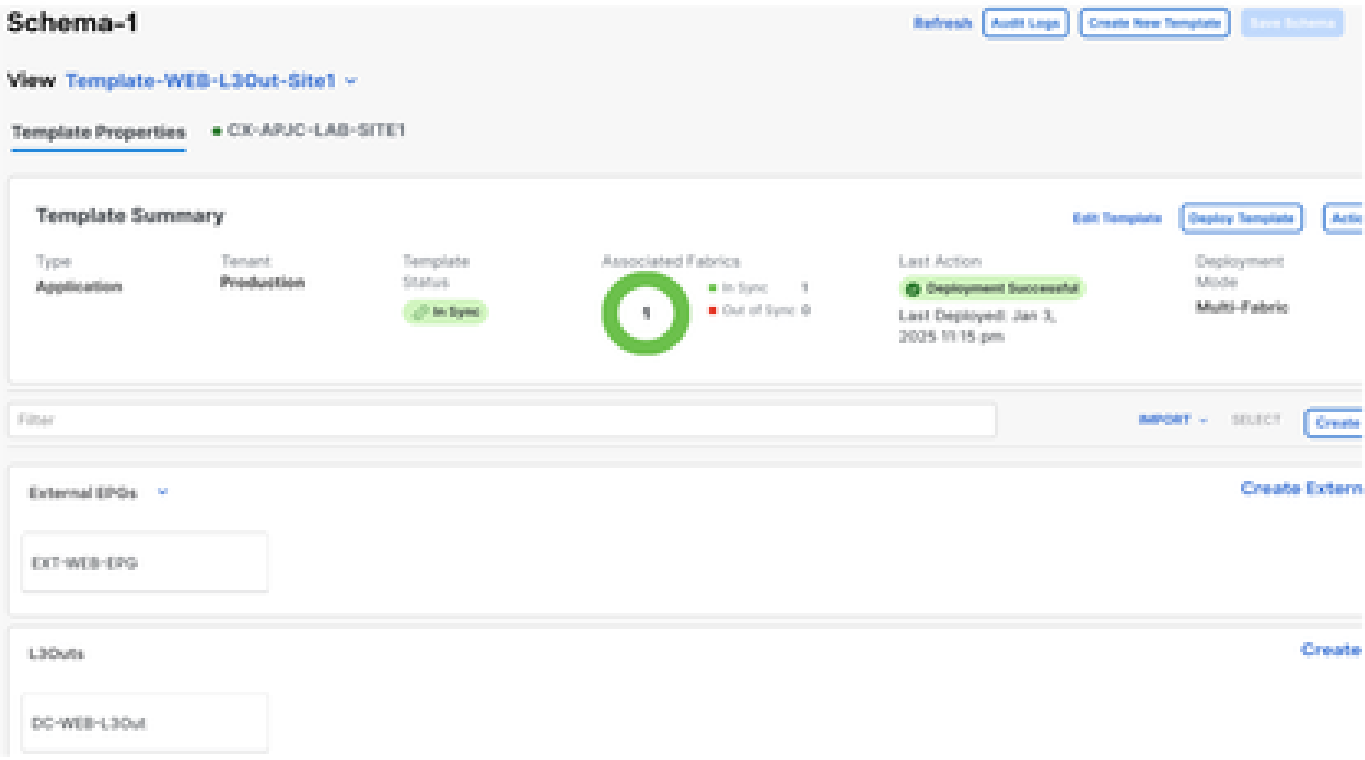


Figure 65:已完成部署



检验DC-VRF-WEB的DR服务器枝叶中的路由

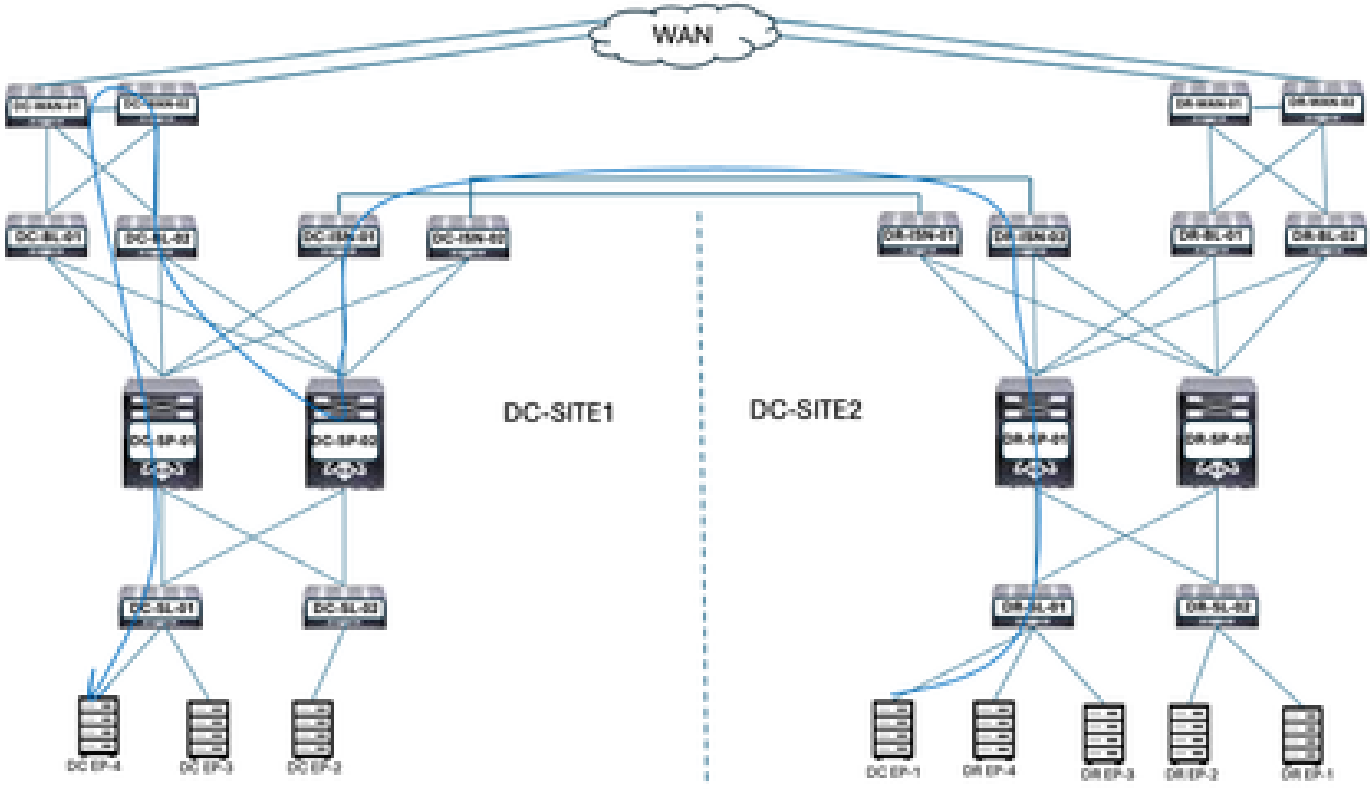
DC-VRF-WEB的DR服务器枝叶中安装的静态路由。

图 66：检验DC-VRF-WEB的DR服务器枝叶中的路由

```
DR-SL-01# show ip route vrf Production:DC-VRF-WEB
IP Route Table for VRF "Production:DC-VRF-WEB"
'*' denotes best ucast next-hop
'**' denotes best mcast next-hop
'[x/y]' denotes [preference/metric]
'%<string>' in via output denotes VRF <string>

0.0.0.0/0, ubest/mbest: 1/0
    *via 172.16.1.232%overlay-1, [200/0], 00:04:41, bgp-65002, internal, tag 65001, rwVnid: vxlan-2883589
```

DC-EP-1迁移后的VRF间流量

图 67：DC-EP-1迁移后的VRF间流量



DC-EP-1使用DC-WEB-L3Out与DC-EP-4通信。流量从DR-ISN流到DC-ISN多站点链路，从DC-ISN流到DC-SP-01/DC-SP-02以及从DC-SP流到DC-BL。DC-BL-01/DC-BL-02将流量转发到DC-WAN交换机以进行VRF间路由。

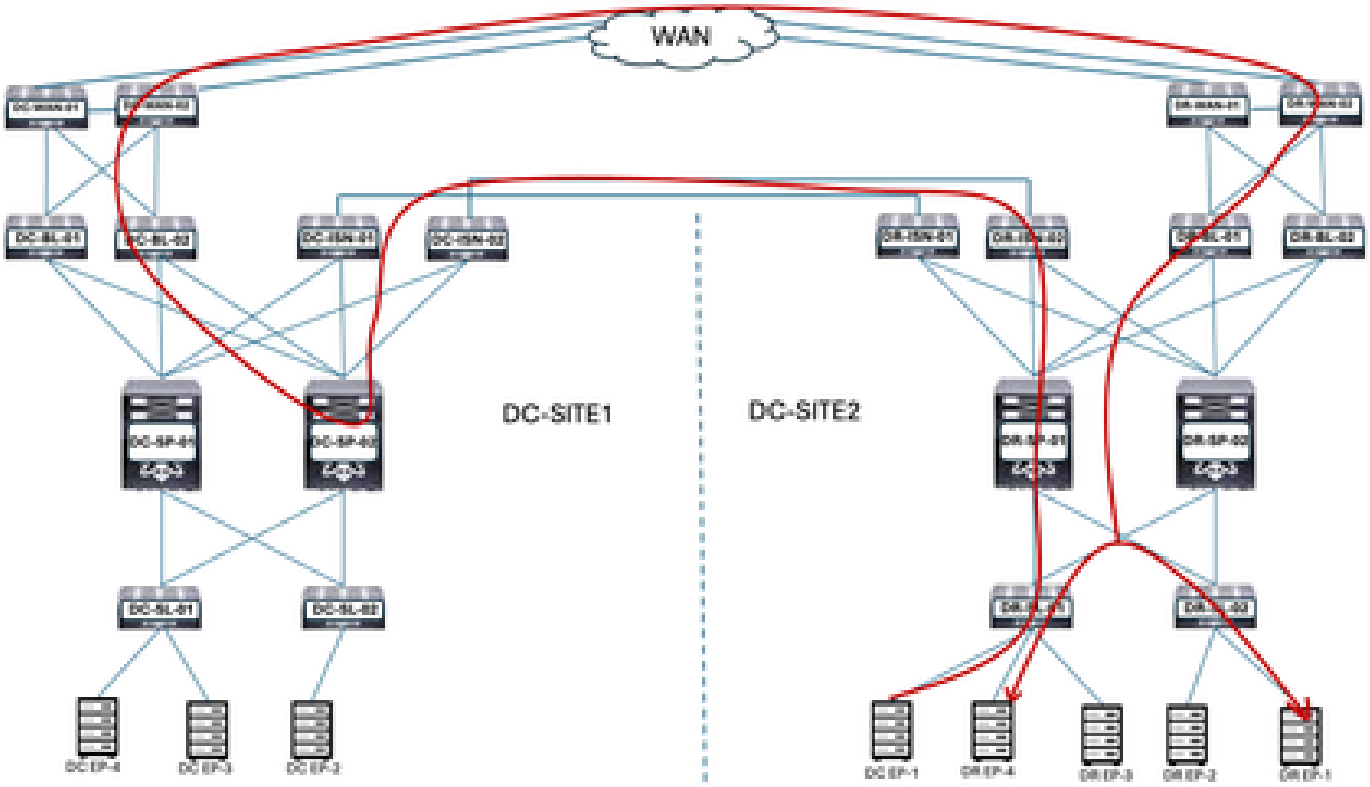
DC-EP-1和DC-EP-4之间的ping响应

图 68：DC-EP-1和DC-EP-4之间的ping响应

```
[redacted]# ping 192.168.30.10 source 192.168.10.10 vrf site-1
PING 192.168.30.10 (192.168.30.10) from 192.168.10.10: 56 data bytes
64 bytes from 192.168.30.10: icmp_seq=0 ttl=249 time=1.781 ms
64 bytes from 192.168.30.10: icmp_seq=1 ttl=249 time=2.617 ms
64 bytes from 192.168.30.10: icmp_seq=2 ttl=249 time=1.288 ms
64 bytes from 192.168.30.10: icmp_seq=3 ttl=249 time=1.116 ms
64 bytes from 192.168.30.10: icmp_seq=4 ttl=249 time=1.135 ms

--- 192.168.30.10 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.116/1.587/2.617 ms
SITE2-EP1#
```

DC-EP-1迁移后的DC间流量

图 69：DC-EP-1迁移后的DC间流量



DC-EP-1使用DC-WEB-L3Out与DR终端通信。流量从DR-ISN流向DC-ISN多站点链路、DC-ISN流向DC-SP-01/DC-SP-02流向DC-SP流向DC-BL。DC-BL-01/DC-BL-02将流量转发到DR终端的DC-WAN交换机。

DC-EP-1和DR-EP之间的ping响应

图 70：DC-EP-1和DR-EP之间的ping响应

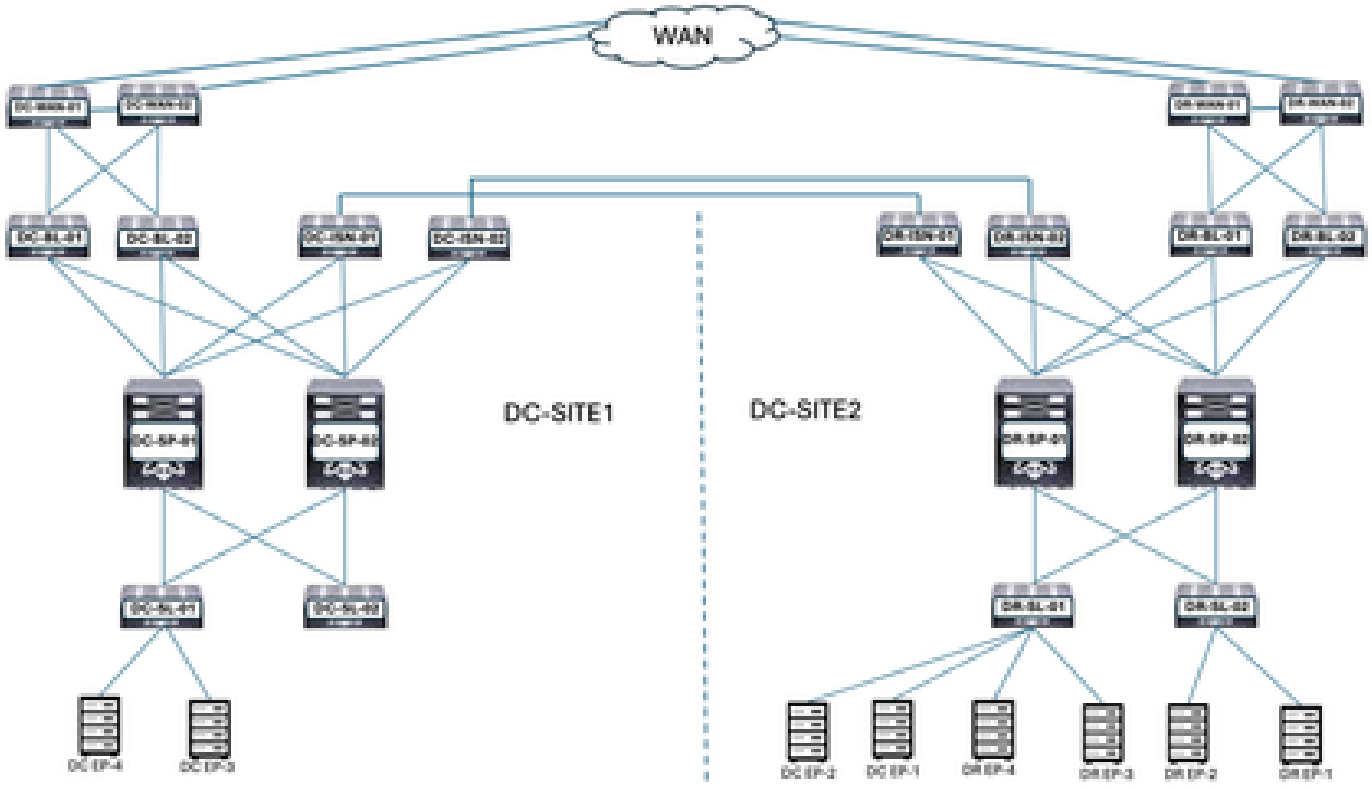
```
SITE2-EP1# ping 192.168.11.10 source 192.168.10.10 vrf site-1
PING 192.168.11.10 (192.168.11.10) from 192.168.10.10: 56 data bytes
Request # timed out
64 bytes from 192.168.11.10: icmp_seq=1 ttl=249 time=2.245 ms
64 bytes from 192.168.11.10: icmp_seq=2 ttl=249 time=1.803 ms
64 bytes from 192.168.11.10: icmp_seq=3 ttl=249 time=1.726 ms
64 bytes from 192.168.11.10: icmp_seq=4 ttl=249 time=1.981 ms

--- 192.168.11.10 ping statistics ---
5 packets transmitted, 4 packets received, 20.00% packet loss
round-trip min/avg/max = 1.726/1.938/2.245 ms
SITE2-EP1#
SITE2-EP1#
SITE2-EP1# ping 192.168.11.20 source 192.168.10.10 vrf site-1
PING 192.168.11.20 (192.168.11.20) from 192.168.10.10: 56 data bytes
Request # timed out
64 bytes from 192.168.11.20: icmp_seq=1 ttl=249 time=1.714 ms
64 bytes from 192.168.11.20: icmp_seq=2 ttl=249 time=1.091 ms
64 bytes from 192.168.11.20: icmp_seq=3 ttl=249 time=1.246 ms
64 bytes from 192.168.11.20: icmp_seq=4 ttl=249 time=1.202 ms

--- 192.168.11.20 ping statistics ---
5 packets transmitted, 4 packets received, 20.00% packet loss
round-trip min/avg/max = 1.091/1.313/1.714 ms
SITE2-EP1#
SITE2-EP1# ping 192.168.21.10 source 192.168.10.10 vrf site-1
PING 192.168.21.10 (192.168.21.10) from 192.168.10.10: 56 data bytes
64 bytes from 192.168.21.10: icmp_seq=0 ttl=249 time=1.554 ms
64 bytes from 192.168.21.10: icmp_seq=1 ttl=249 time=1.163 ms
64 bytes from 192.168.21.10: icmp_seq=2 ttl=249 time=1.178 ms
64 bytes from 192.168.21.10: icmp_seq=3 ttl=249 time=1.255 ms
64 bytes from 192.168.21.10: icmp_seq=4 ttl=249 time=1.261 ms

--- 192.168.21.10 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.163/1.282/1.554 ms
SITE2-EP1#
SITE2-EP1#
SITE2-EP1# ping 192.168.31.10 source 192.168.10.10 vrf site-1
PING 192.168.31.10 (192.168.31.10) from 192.168.10.10: 56 data bytes
64 bytes from 192.168.31.10: icmp_seq=0 ttl=249 time=1.51 ms
64 bytes from 192.168.31.10: icmp_seq=1 ttl=249 time=1.31 ms
64 bytes from 192.168.31.10: icmp_seq=2 ttl=249 time=1.263 ms
64 bytes from 192.168.31.10: icmp_seq=3 ttl=249 time=1.278 ms
64 bytes from 192.168.31.10: icmp_seq=4 ttl=249 time=1.247 ms

--- 192.168.31.10 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.247/1.321/1.51 ms
```

迁移剩余终端

剩余终端迁移后的物理设计

将剩余终端从DC迁移到DR DC-EPG1-WEB后，物理图发生了相应更改。

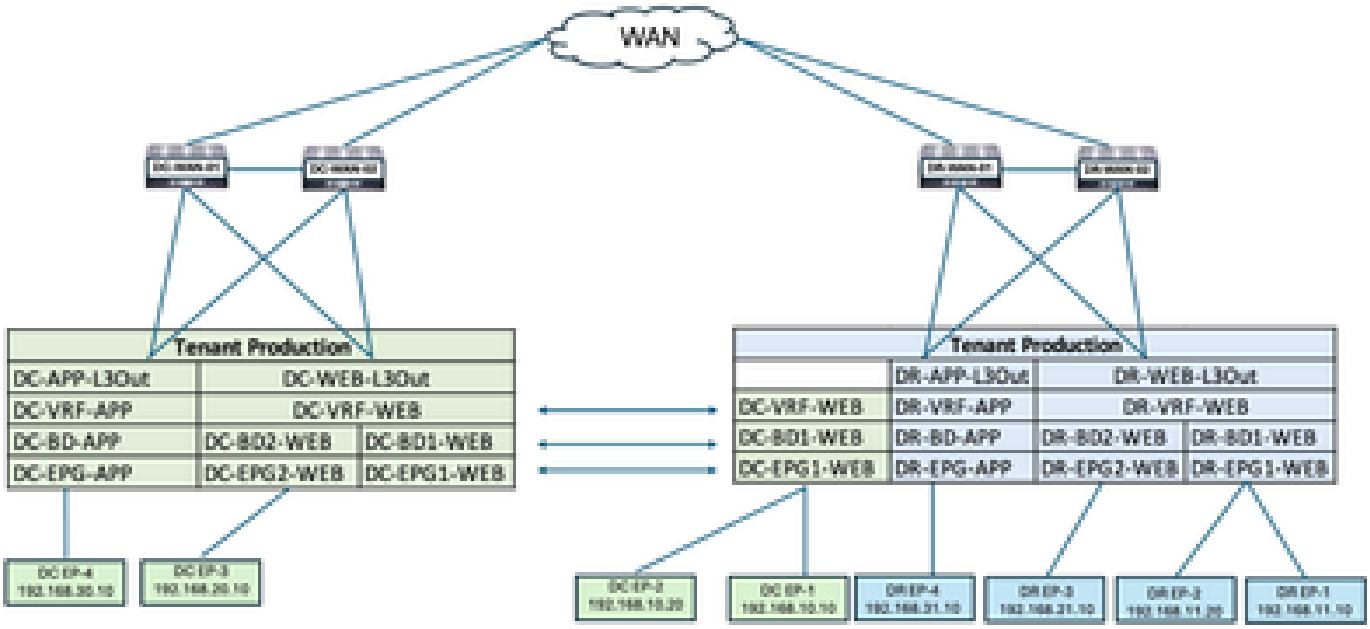
图 71：所有终端从DC迁移到DR后的物理设计



剩余终端迁移后的逻辑设计

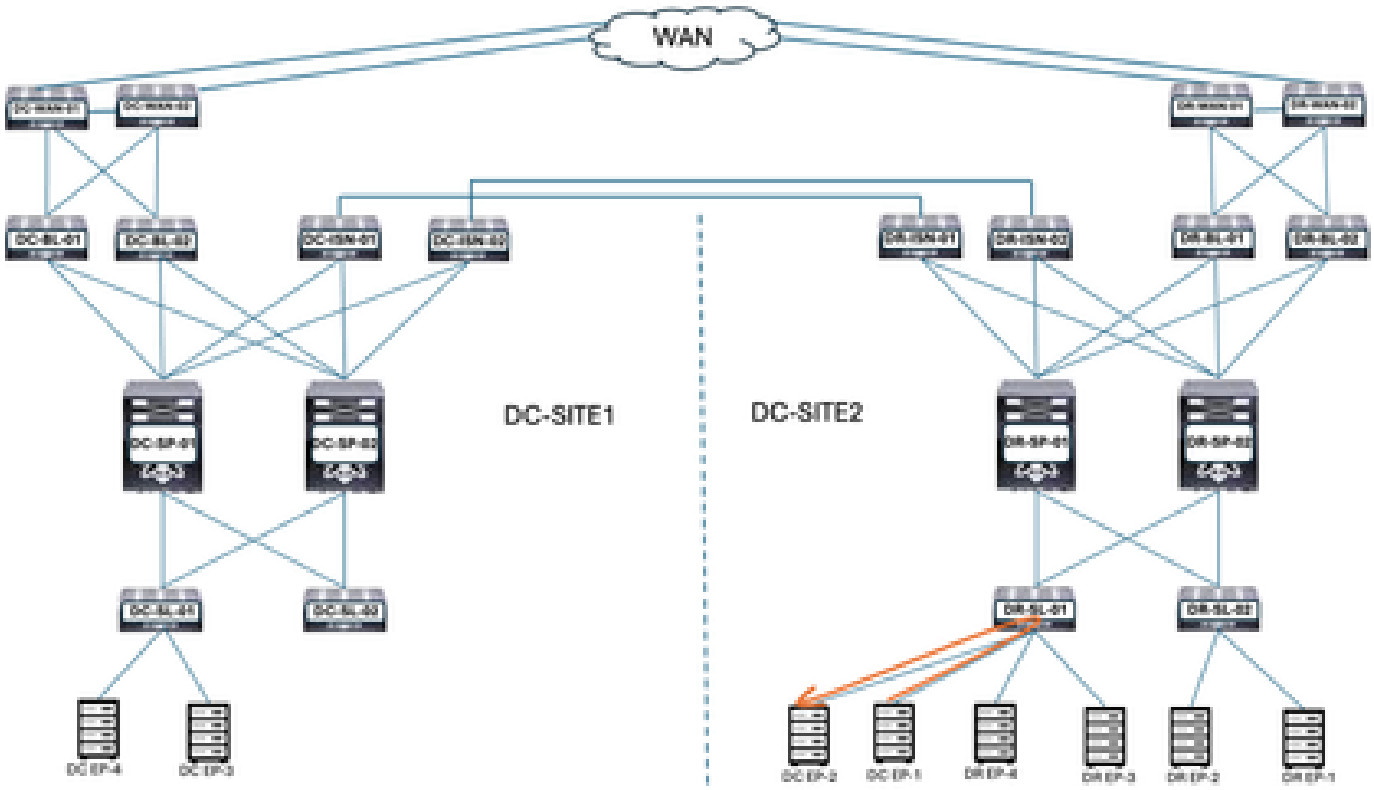
DC-EPG1-WEB、DC-BD1-WEB和DC-VRF-WEB已在DC和DR站点之间展开。DC剩余终端从DC迁移到DR站点。

图 72：恢复终端迁移后的逻辑设计



剩余终端迁移后的EPG内流量

图 73：剩余终端迁移后的EPG内流量



DC-EP-1和DC-EP-2之间的通信是EPG内部通信，因为两个终端都属于DC-EPG1-WEB。此通信直接在DR站点内发生。

EPG间、VRF间和DC间流量流仍然类似于DC-EP-1迁移。

从DC站点取消部署模板 — EPG1-BD1-Stretched

所有终端都从DC迁移到DC-EPG1-WEB的DR站点。DC站点中不需要DC-EPG1-WEB和DC-BD1-WEB。从DC站点取消部署Template-EPG1-BD1-Loaded，这将从站点1删除EPG和BD。

图 74：点击取消部署模板(Undeploy Template)

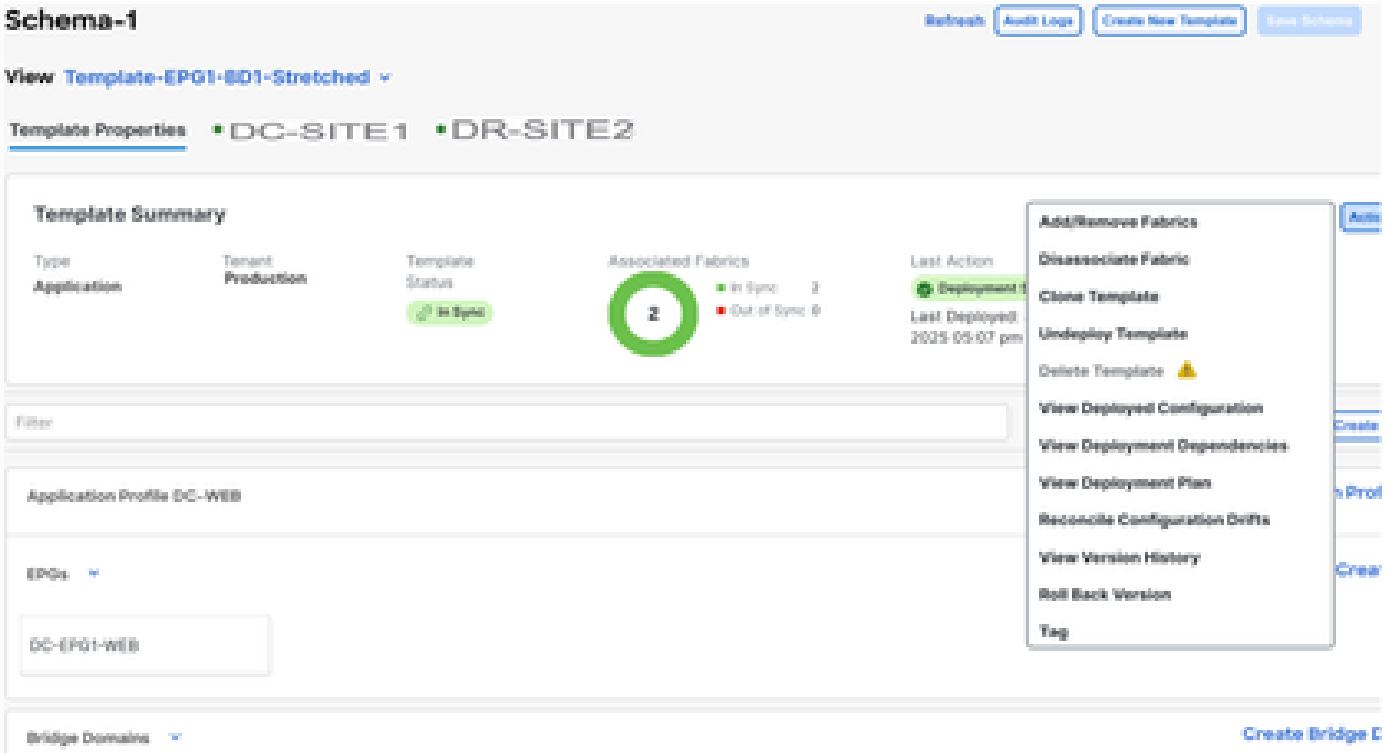
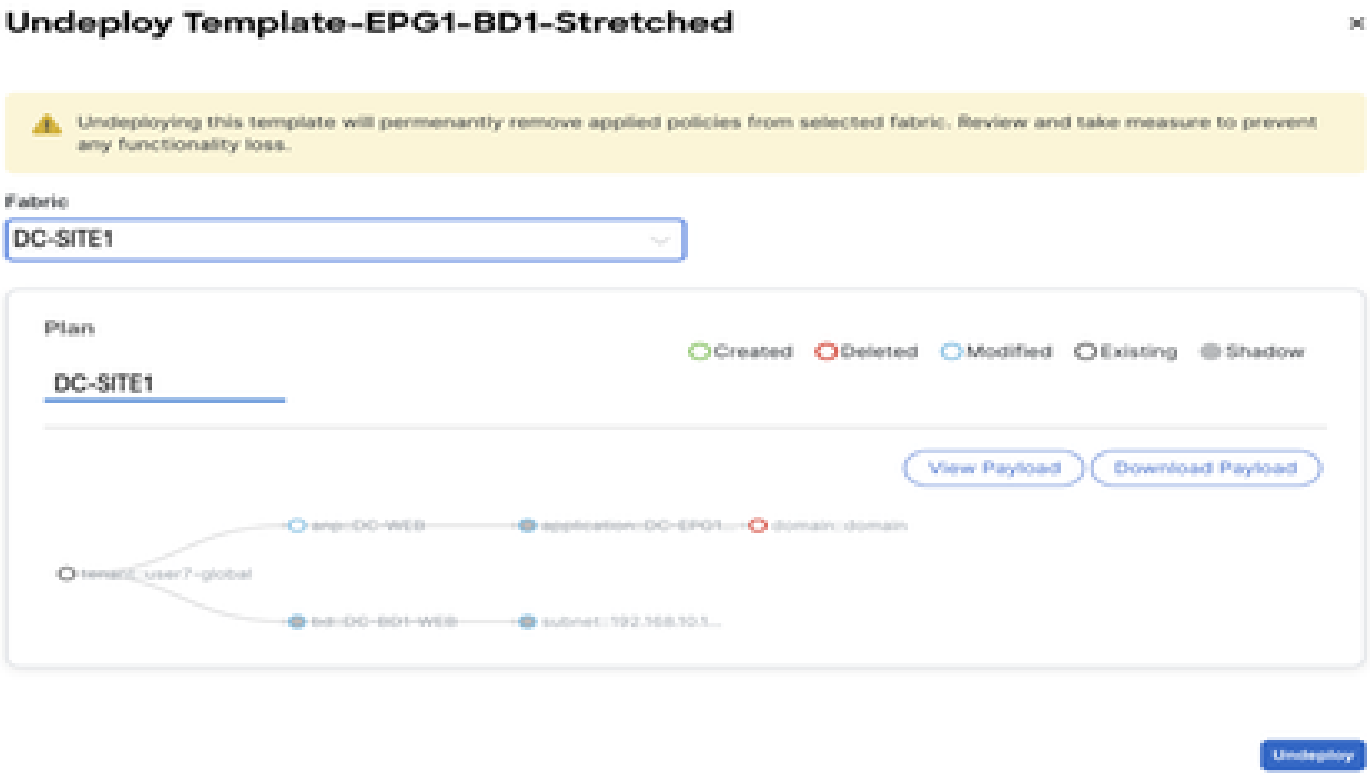


图 75：选择DC-SITE1并点击undeploy



从DC站点取消关联模板 — EPG1-BD1-Streted

此步骤将Template-EPG1-BD-Stretched从DC站点分离。

图 76：点击取消关联模板(Disassociate Template)

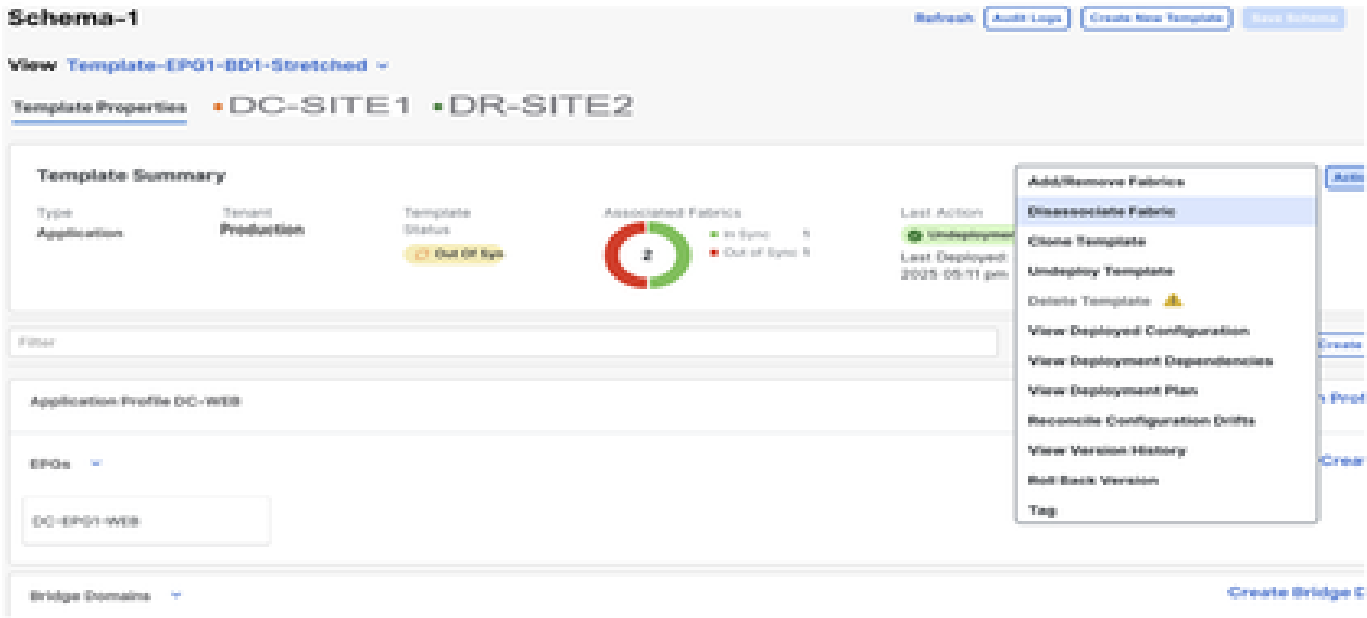
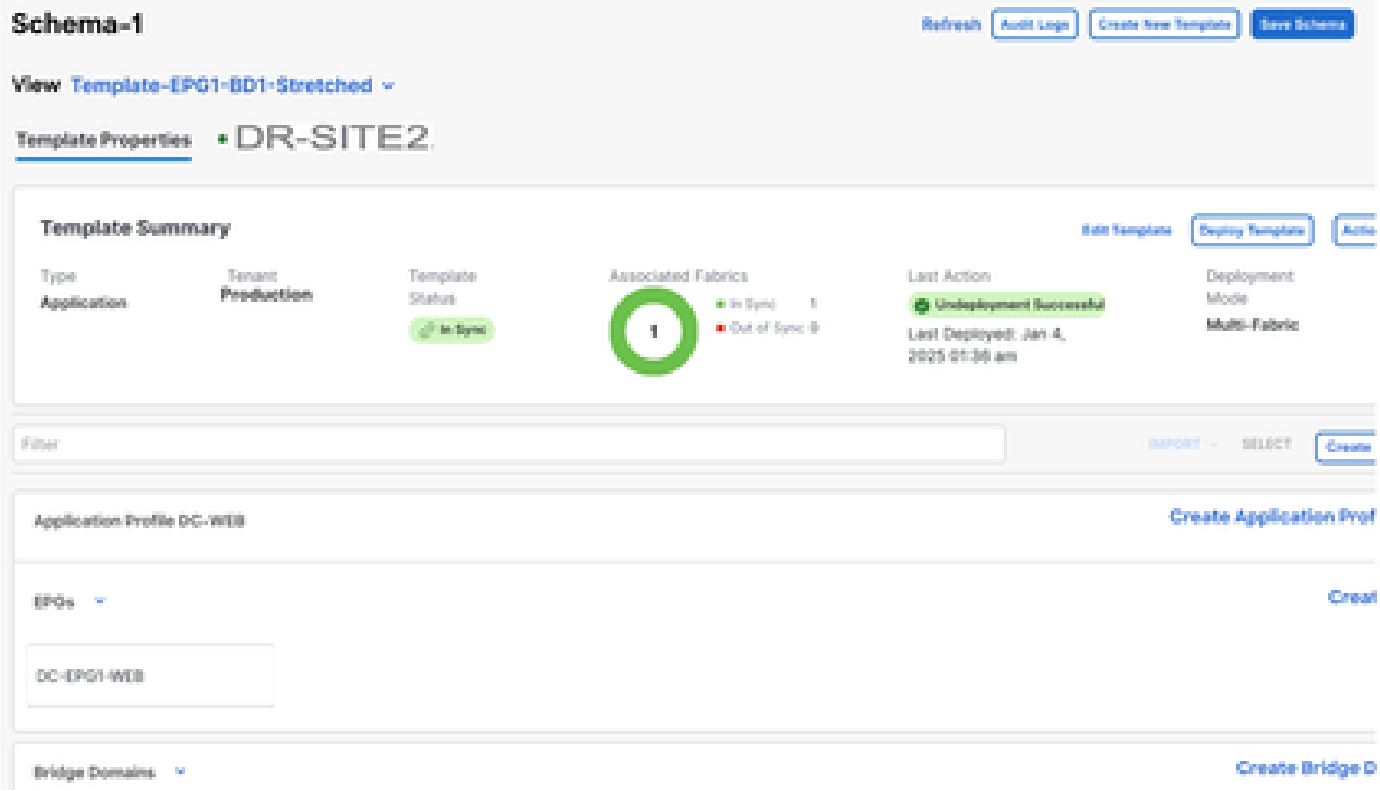


图 77：取消选中DC-SITE1

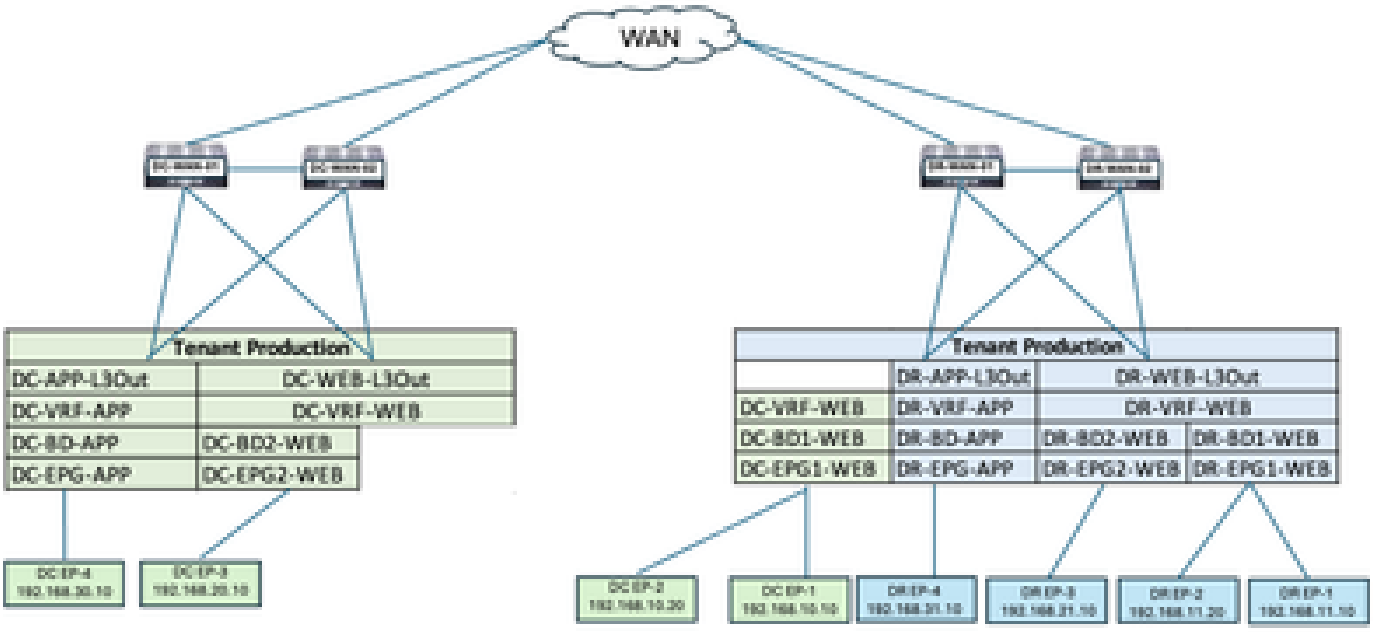
图 78：DC-SITE2 Template-EPG1-BD1-Longed的一部分



从DC取消部署Template-EPG1-BD1-Loaded后的逻辑设计

取消部署模板后，DC-EPG1-WEB和DC-BD1-WEB不是DC站点的一部分。

图 79：取消部署模板后的逻辑设计



Template-VRF-Contract-Site2创建

在架构1中创建了Template-VRF-Contract-Site2。DR-SITE2已添加到与同一模板关联的模板和租户 — Production。这是特定于站点的模板。此模板用于将DC-EPG1-WEB和DC-BD1-WEB的DR站点的VRF和合同关联。

图80:添加应用模板 — 选择ACI多云

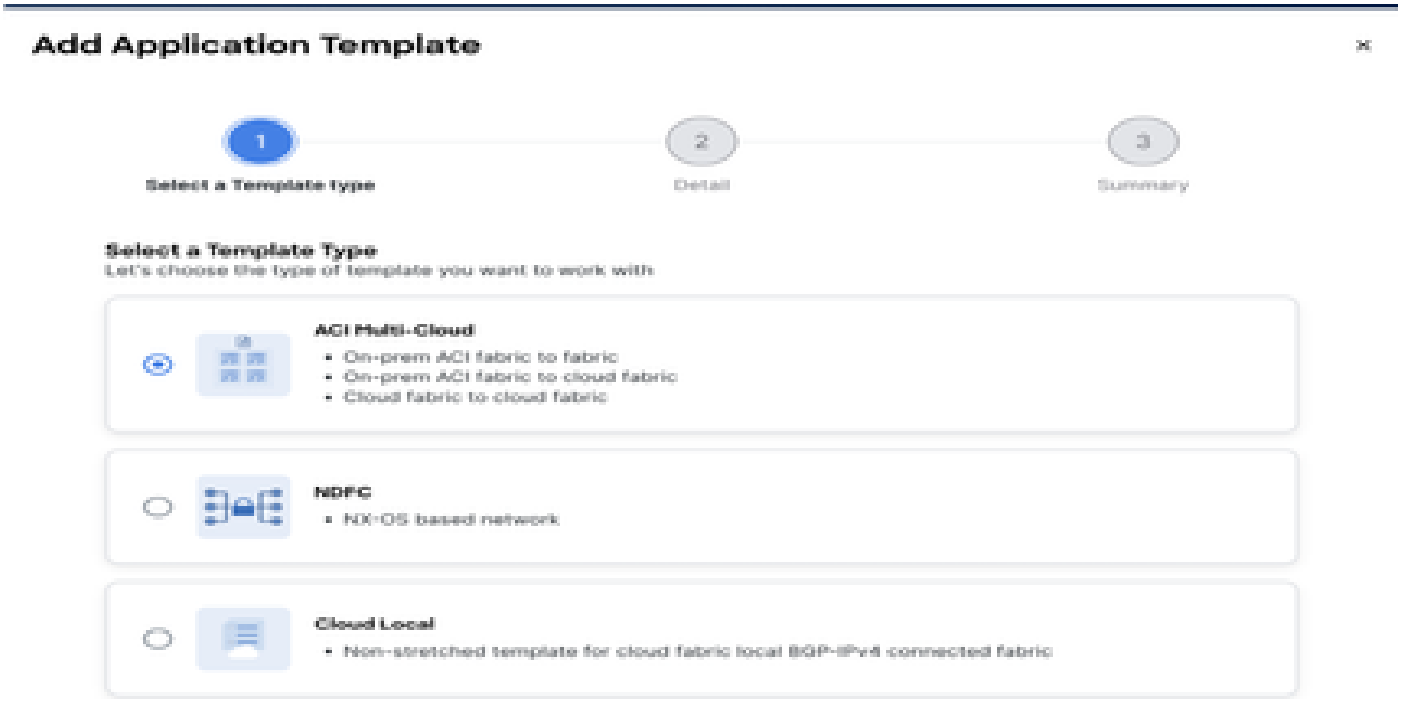


Figure 81:添加模板名称Template-VRF-Contract-Site2，选择租户生产

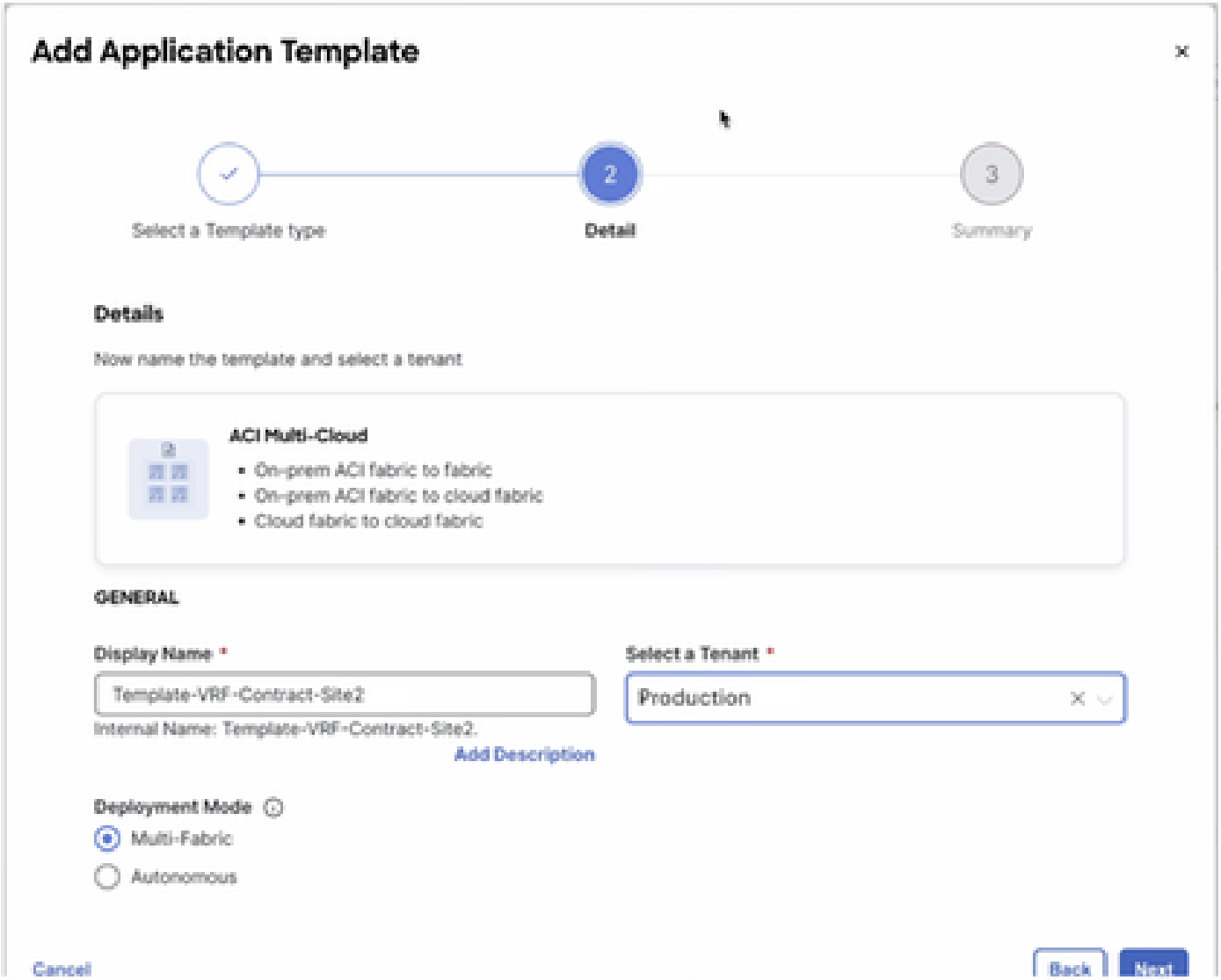
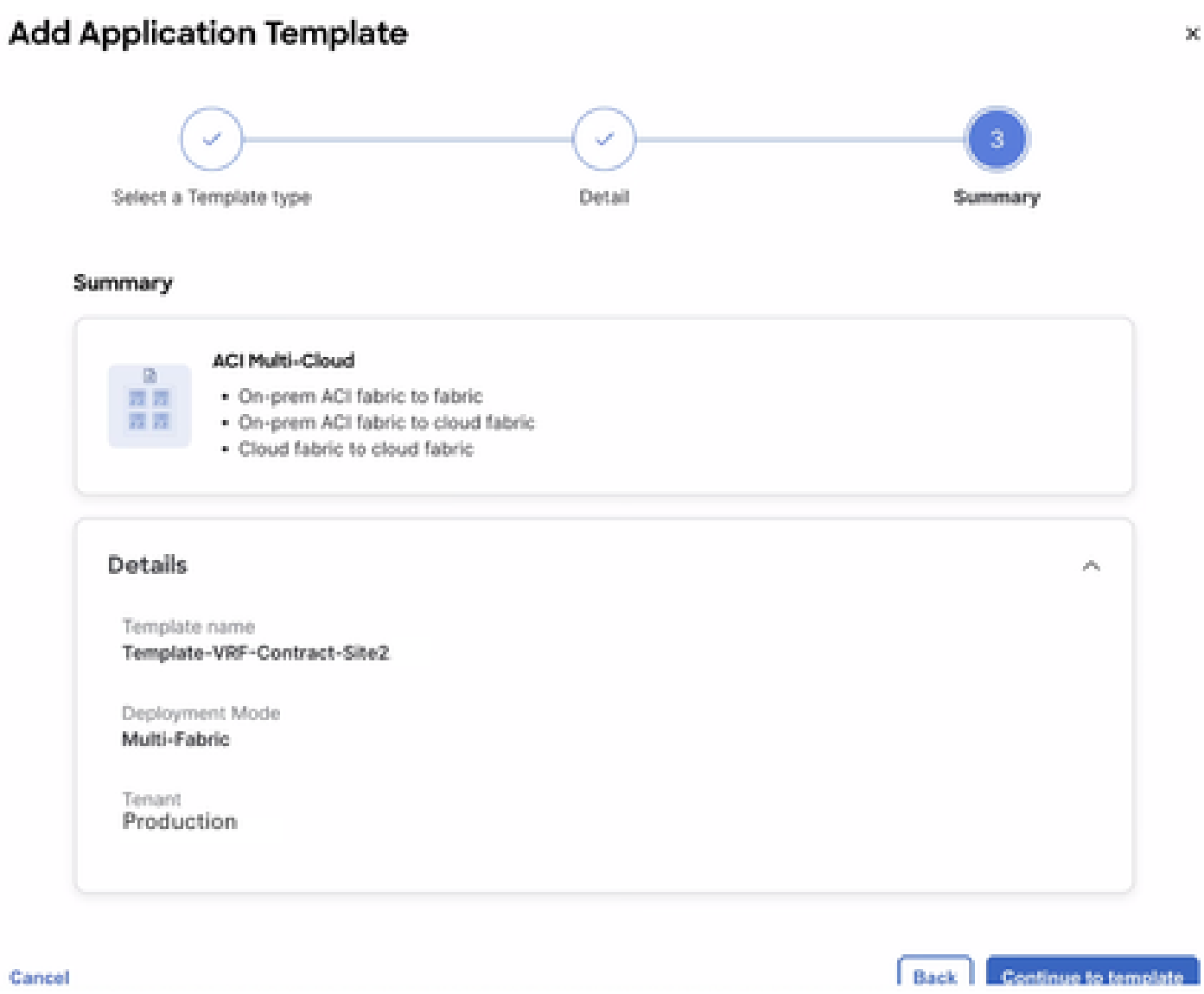


Figure 82:Template-VRF-Contract-Site2详细信息



在Template-VRF-Contract-Site2中导入VRF-Contract

从DR-SITE2导入DR-VRF-WEB和DR-VRF-WEB合同。

图83:单击“导入”并选择DR-SITE2

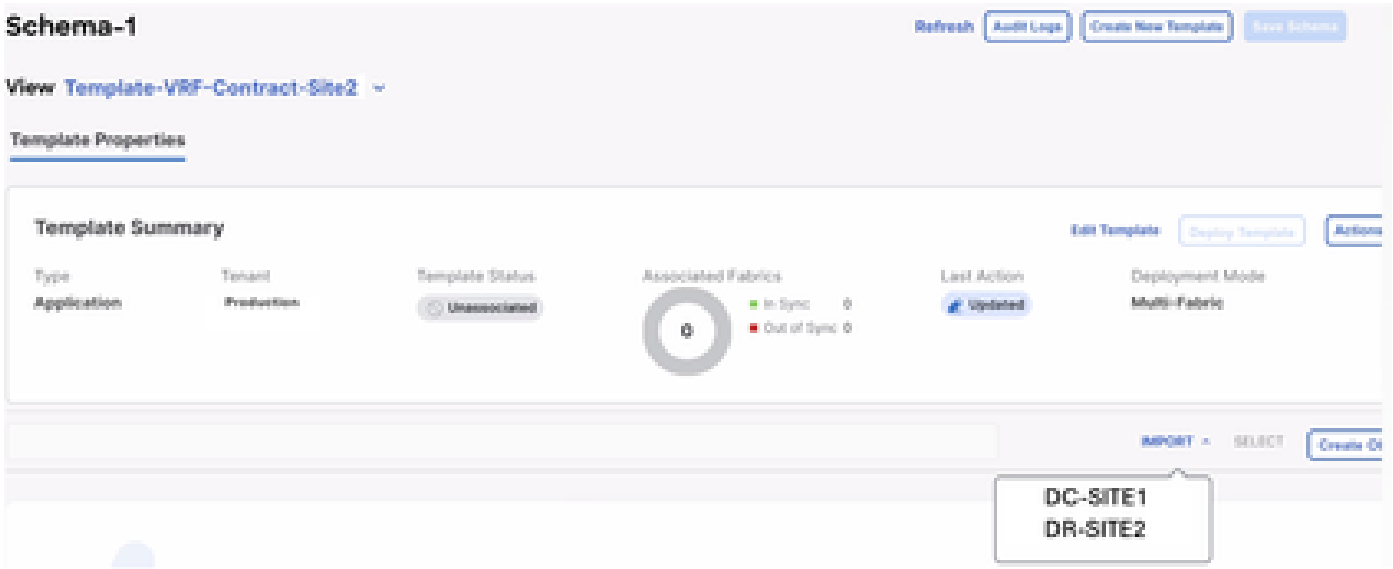


Figure 84:从DR-SITE2中选择合同

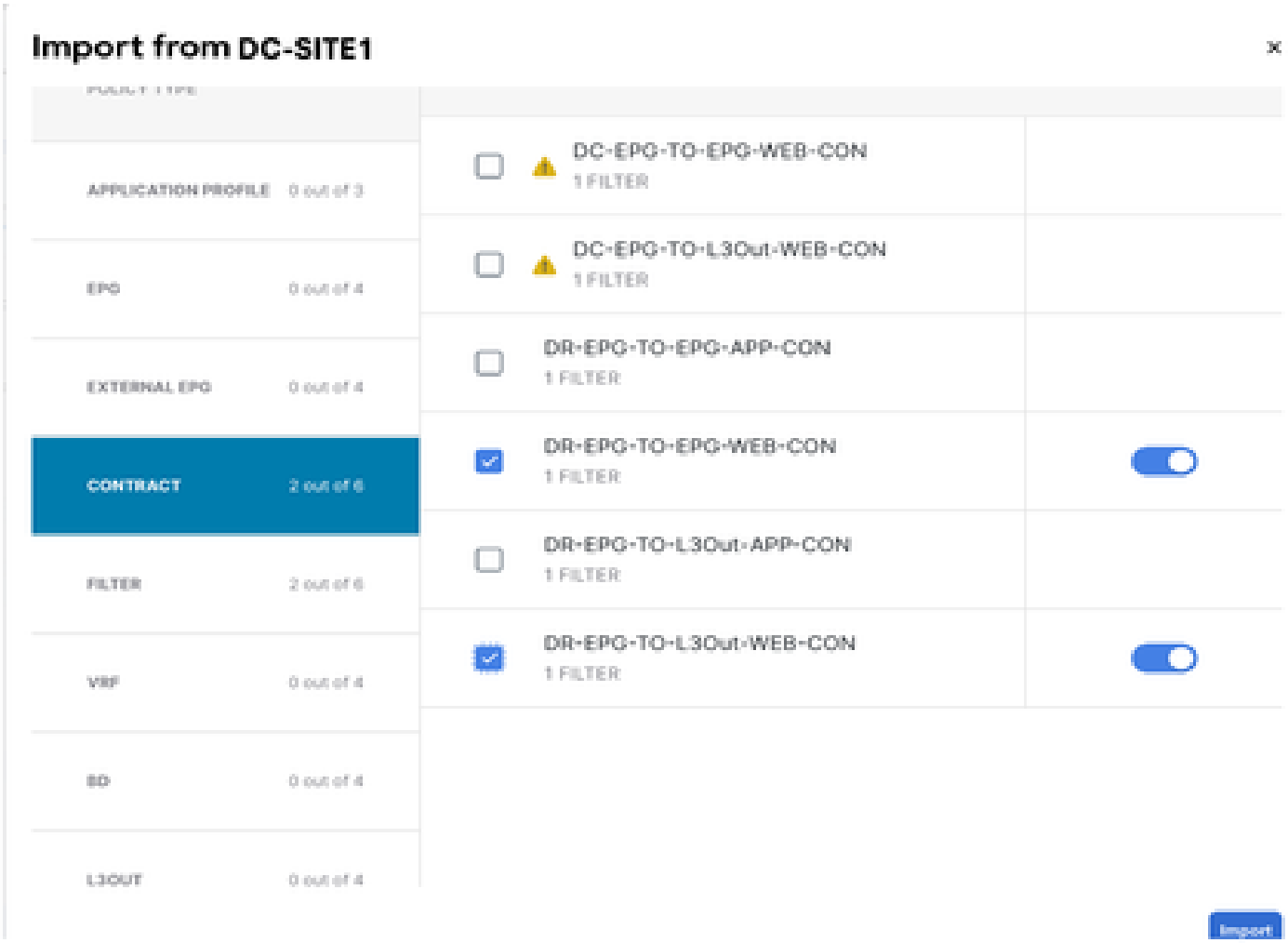


Figure 85:选择Filter from DR-SITE2

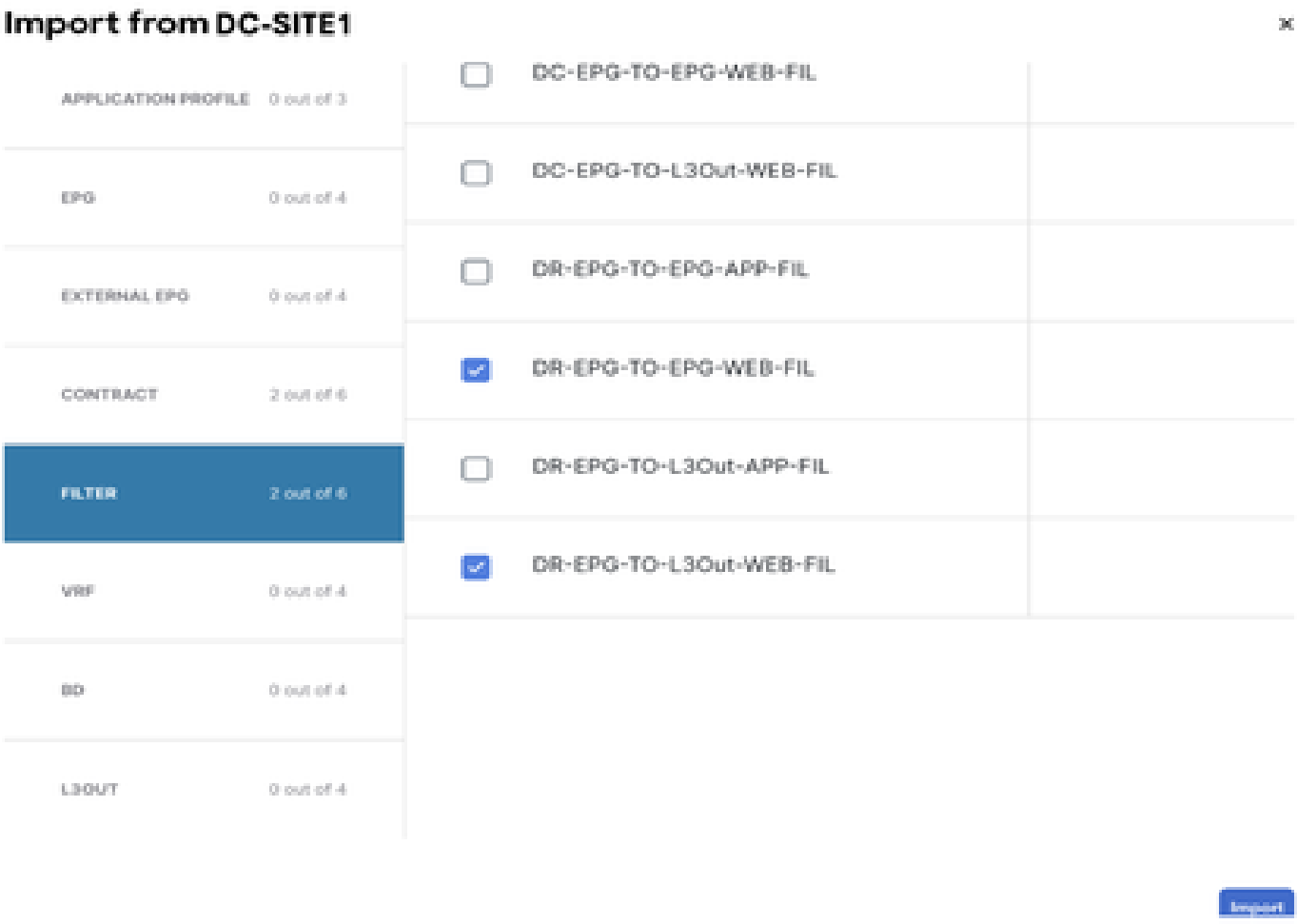


Figure 86:从DR-SITE2中选择VRF

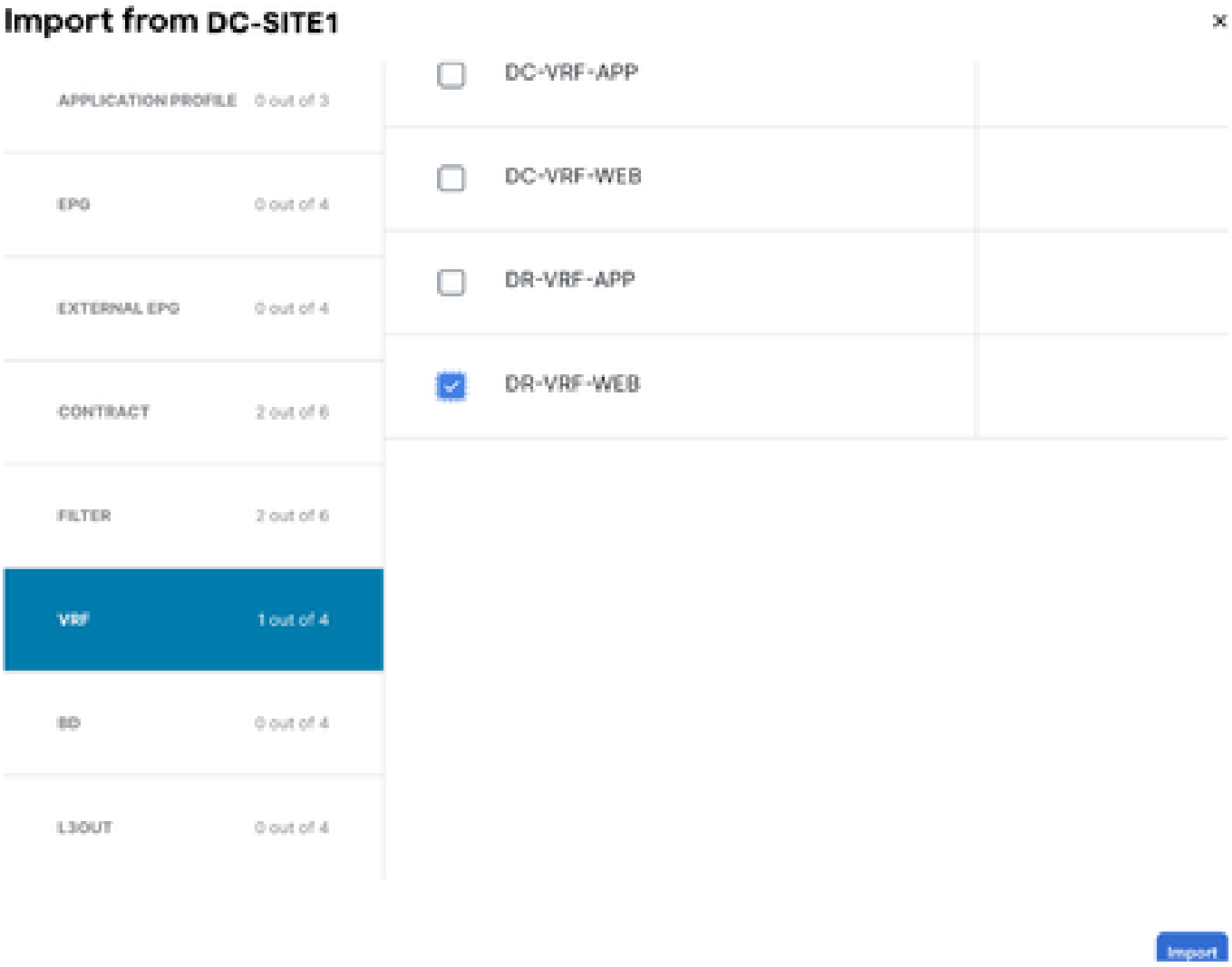


图 87：包含VRF/合同信息的模板 — WEB-VRF-Contract-Site2

部署Template-VRF-Contract-Site2

点击Deploy Template-VRF-Contract-Site2并选择DR-SITE2

图88:将交换矩阵添加到Template-VRF-Contract-Site2

Figure 89:部署外部同步模板

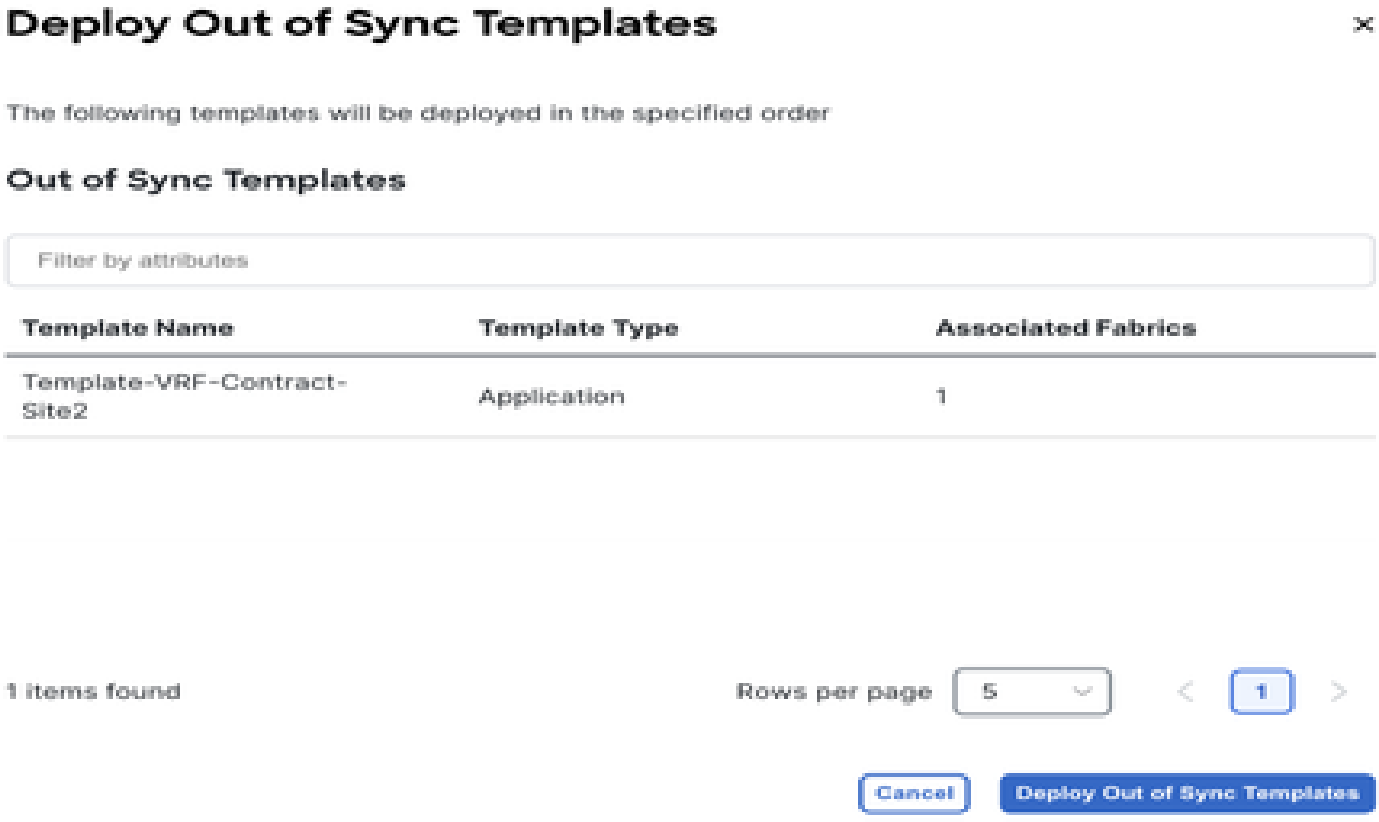
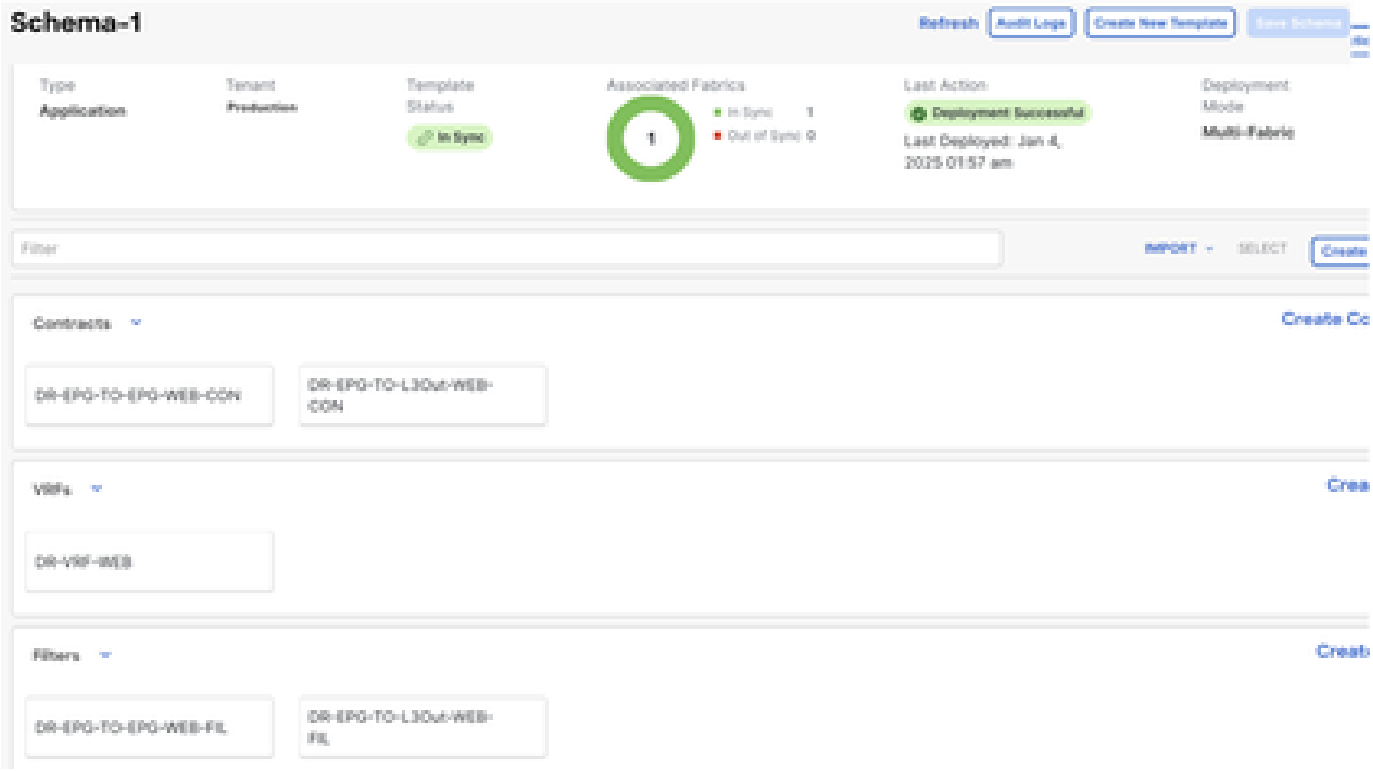


Figure 90:已完成部署



将DR-VRF-WEB关联到DC-BD1-WEB

从之前创建的Template-EPG1-BD1-Loaded将DR-VRF-WEB关联到DC-BD1-WEB。DC-BD1-WEB是DR-SITE2的一部分。

图 91：点击Template-EPG1-BD1-Longed

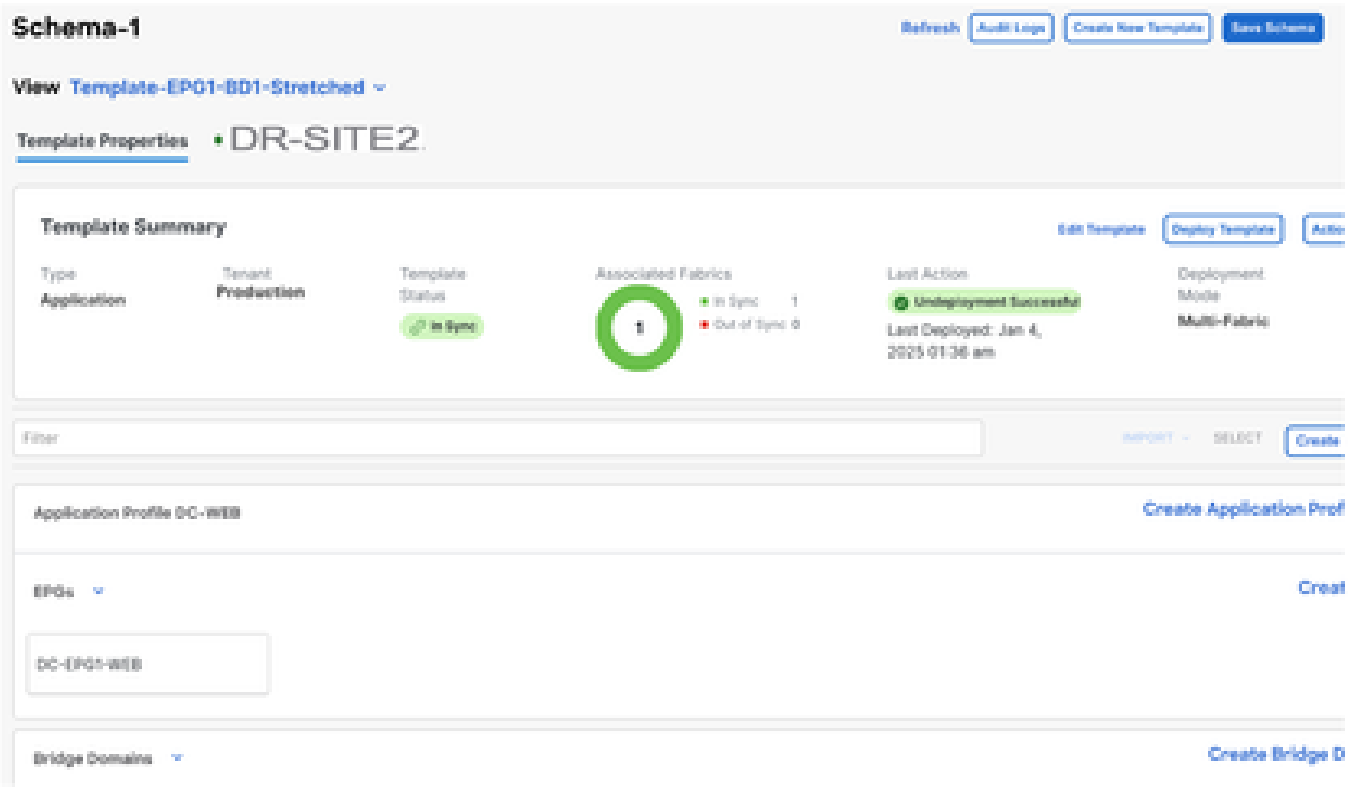
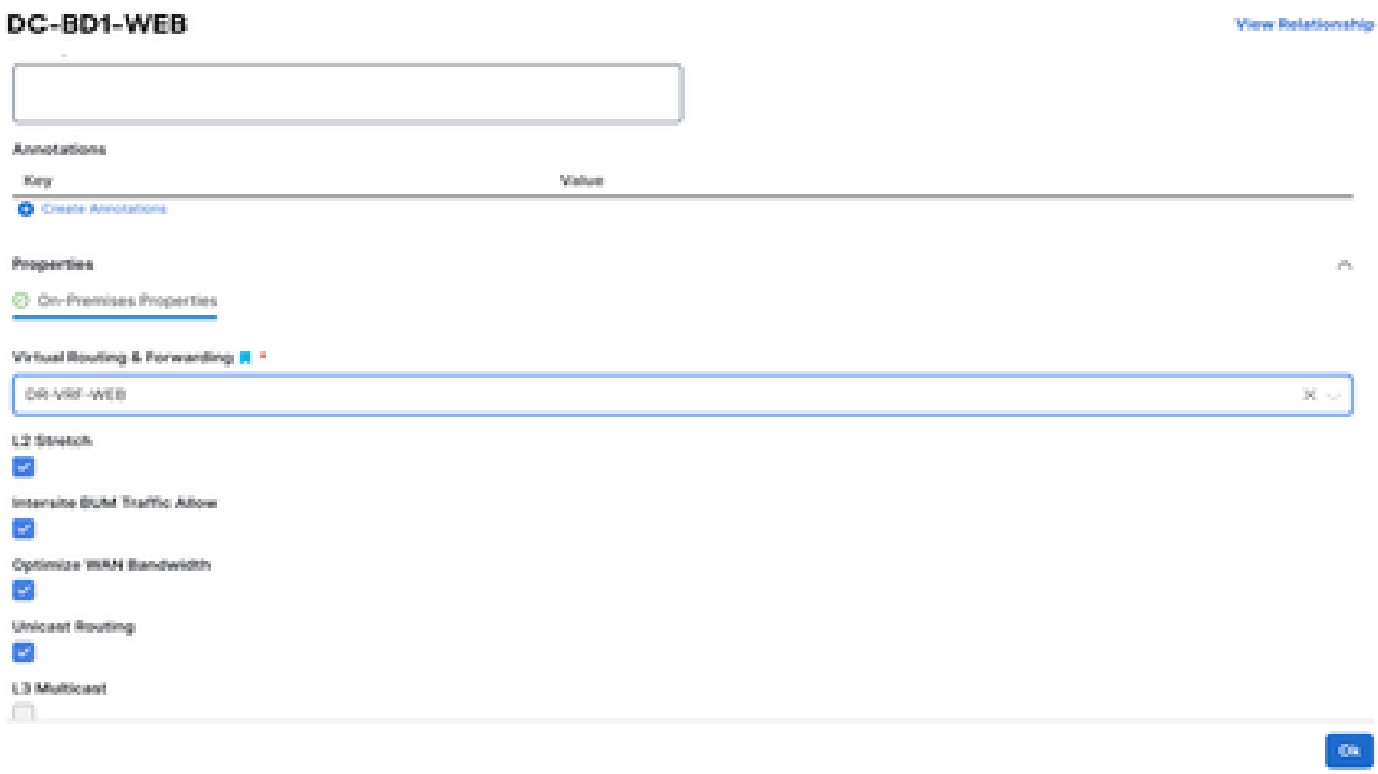


图 92：将DR-VRF-WEB关联到DC-BD1-WEB



将DR-Contracts应用于DC-EPG1-WEB

将DR-Contract应用于DC-EPG1-WEB，DC-EPG1-WEB使用DR合同从DC-EPG1-WEB进行通信，用于DC间、VRF间和EPG间。DC-EPG1-WEB是DR-SITE2的一部分

图 93：从DC-EPG1-WEB删除DC-Contracts

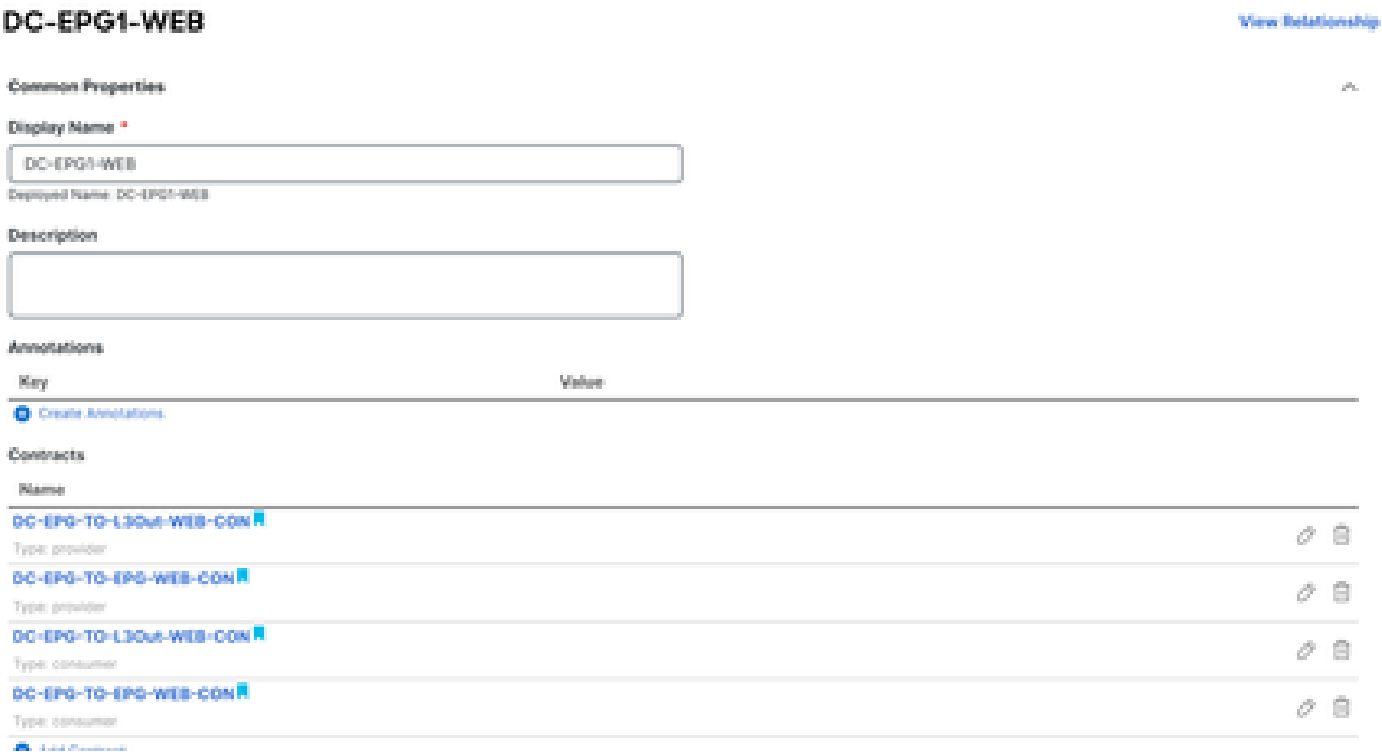


图 94：在DC-EPG1-WEB中添加DR-Contracts

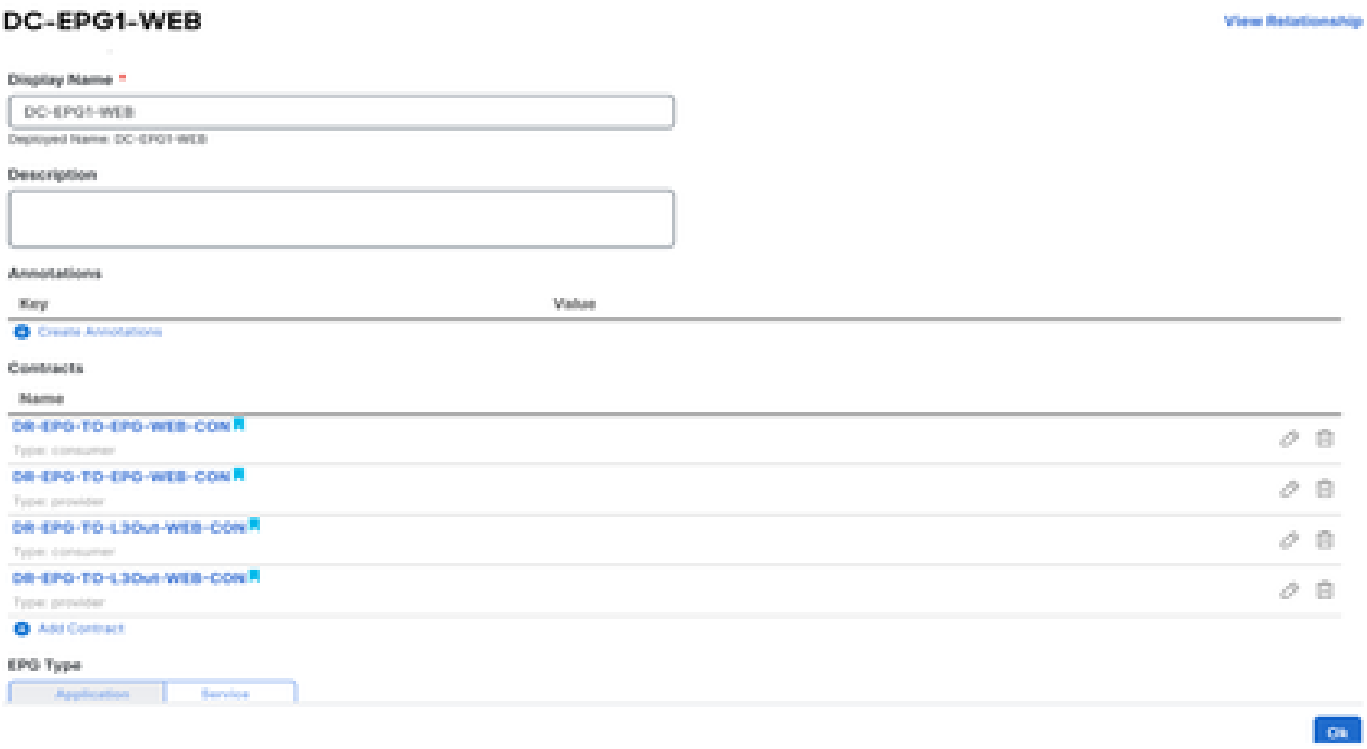


Figure 95:模板 — EPG1-BD1 — 延伸信息

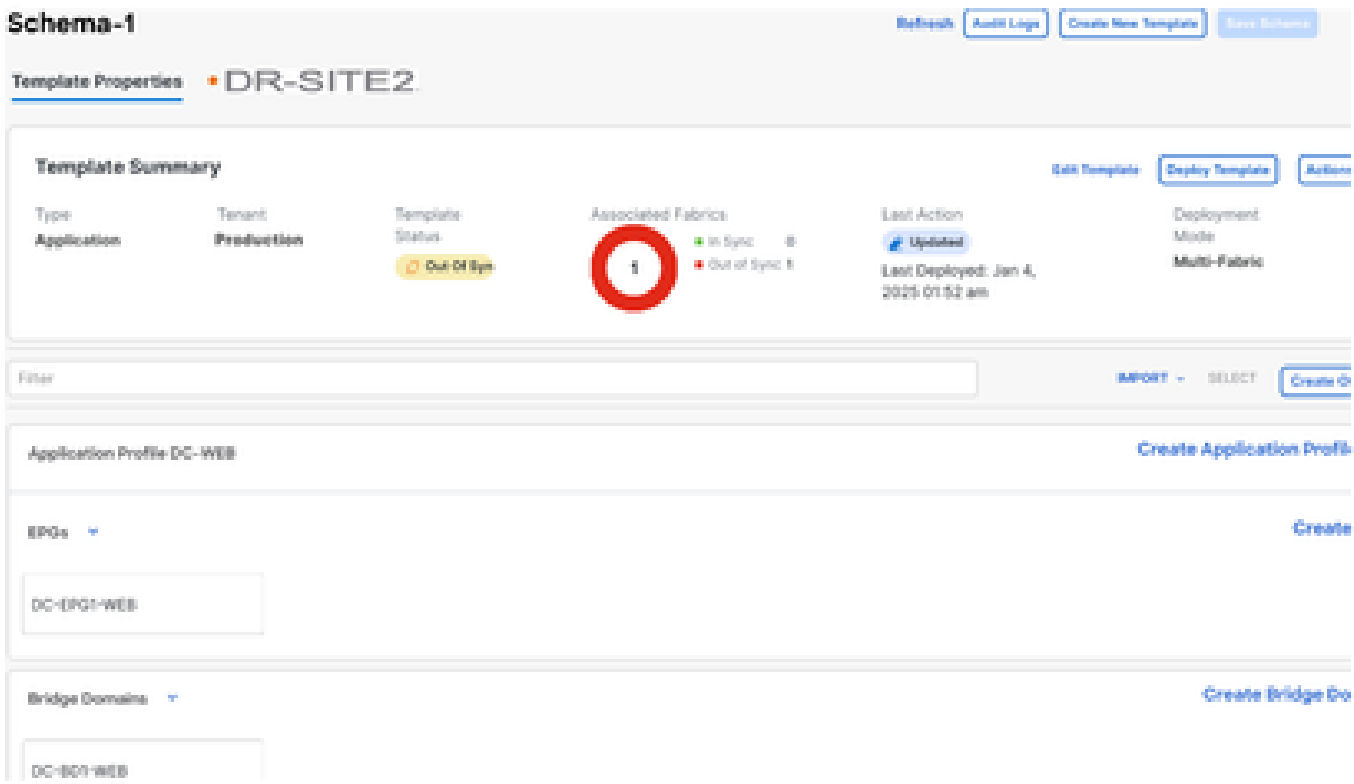


Figure 96：部署外部同步模板

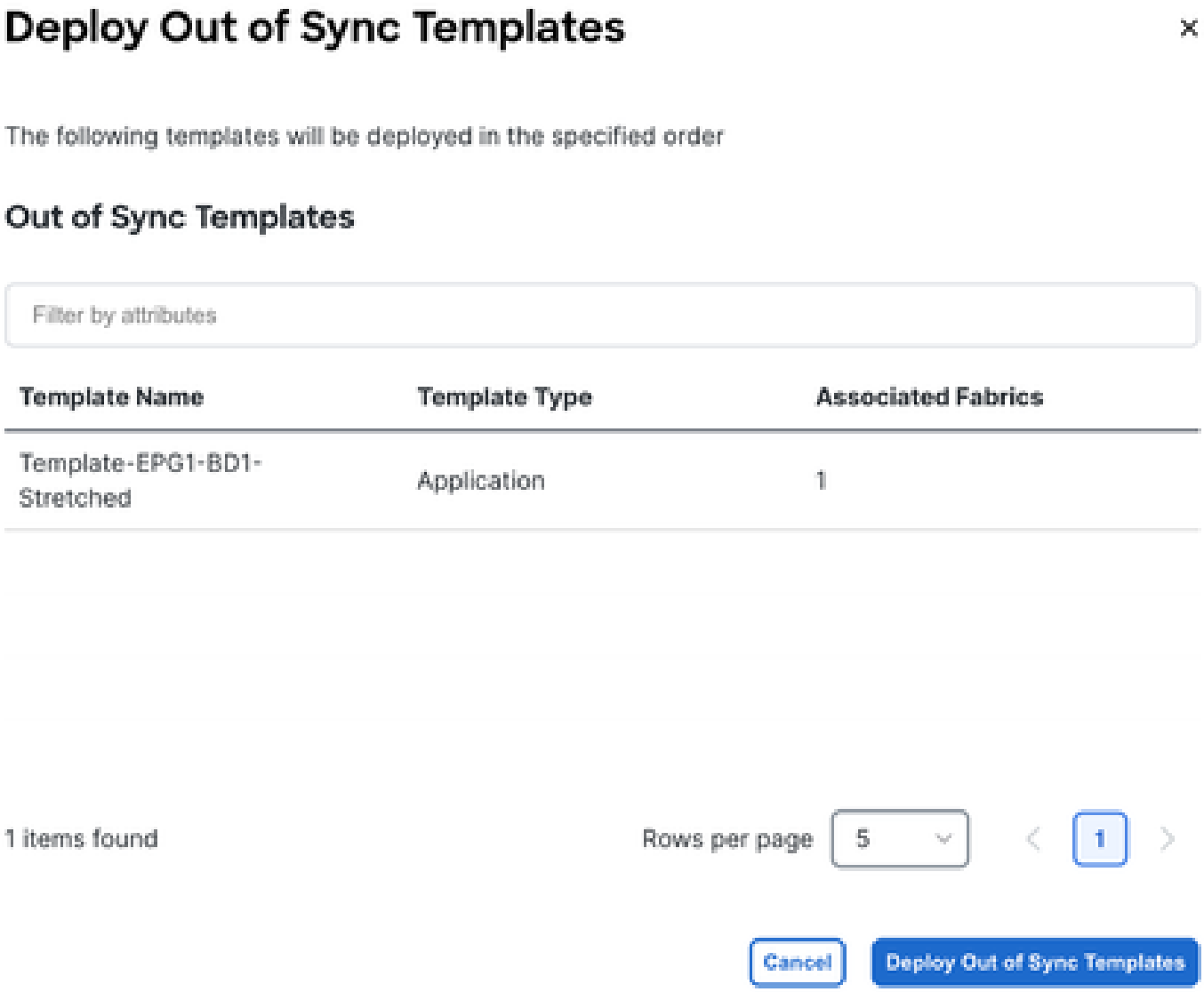
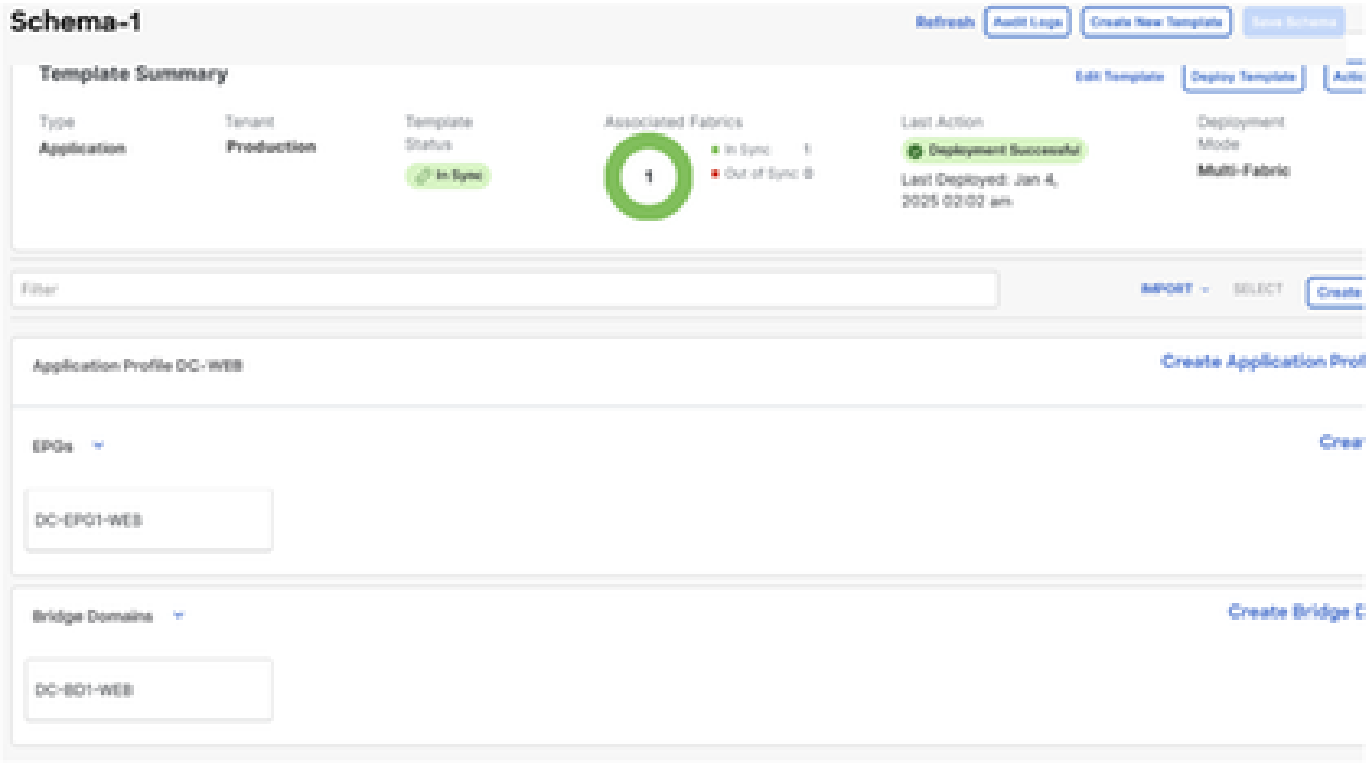


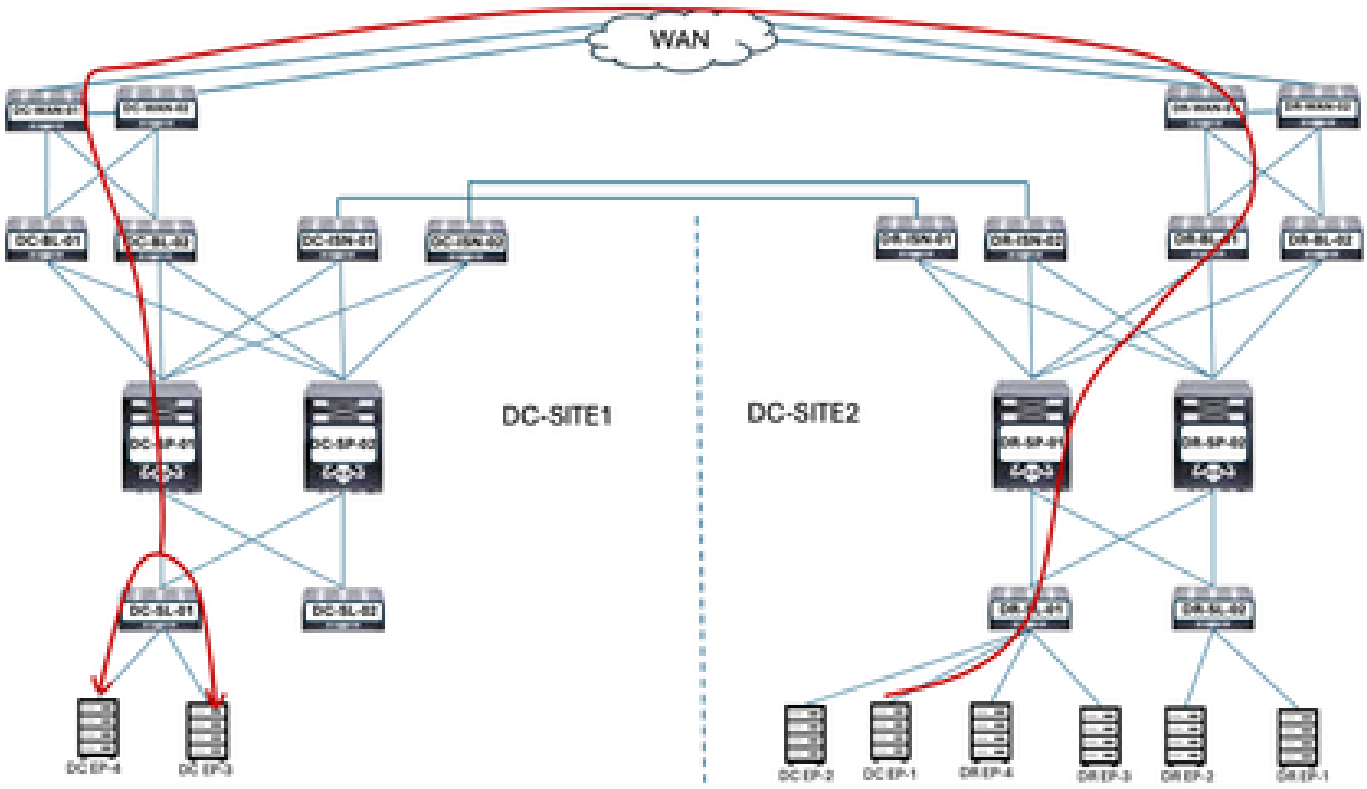
Figure 97:已完成部署



DC-Endpoint-1流量

DC-Endpoint-1开始使用DR-L3Out-WEB与DC端点进行通信。此通信需要更改WAN交换机上的路由。

图 98：DC-Endpoint-1流量



DC-EP-1和DC/DR-EP之间的ping响应

图 99：DC-EP-1和DC-EP-2之间的ping响应

```
[redacted]# ping 192.168.30.10 source 192.168.10.10 vrf site-1
PING 192.168.30.10 (192.168.30.10) from 192.168.10.10: 56 data bytes
64 bytes from 192.168.30.10: icmp_seq=0 ttl=249 time=2.406 ms
64 bytes from 192.168.30.10: icmp_seq=1 ttl=249 time=1.05 ms
64 bytes from 192.168.30.10: icmp_seq=2 ttl=249 time=1.063 ms
64 bytes from 192.168.30.10: icmp_seq=3 ttl=249 time=1.08 ms
64 bytes from 192.168.30.10: icmp_seq=4 ttl=249 time=0.987 ms

--- 192.168.30.10 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 0.987/1.317/2.406 ms
SITE2-EP1#
SITE2-EP1# ping 192.168.11.10 source 192.168.10.10 vrf site-1
PING 192.168.11.10 (192.168.11.10) from 192.168.10.10: 56 data bytes
Request 0 timed out
64 bytes from 192.168.11.10: icmp_seq=1 ttl=252 time=1.439 ms
64 bytes from 192.168.11.10: icmp_seq=2 ttl=252 time=0.993 ms
64 bytes from 192.168.11.10: icmp_seq=3 ttl=252 time=1.615 ms
64 bytes from 192.168.11.10: icmp_seq=4 ttl=252 time=1.187 ms

--- 192.168.11.10 ping statistics ---
5 packets transmitted, 4 packets received, 20.00% packet loss
round-trip min/avg/max = 0.993/1.308/1.615 ms
SITE2-EP1#
SITE2-EP1# ping 192.168.21.10 source 192.168.10.10 vrf site-1
PING 192.168.21.10 (192.168.21.10) from 192.168.10.10: 56 data bytes
64 bytes from 192.168.21.10: icmp_seq=0 ttl=252 time=1.491 ms
64 bytes from 192.168.21.10: icmp_seq=1 ttl=252 time=1.593 ms
64 bytes from 192.168.21.10: icmp_seq=2 ttl=252 time=1.016 ms
64 bytes from 192.168.21.10: icmp_seq=3 ttl=252 time=1.01 ms
64 bytes from 192.168.21.10: icmp_seq=4 ttl=252 time=1.048 ms

--- 192.168.21.10 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.01/1.231/1.593 ms
SITE2-EP1# ping 192.168.31.10 source 192.168.10.10 vrf site-1
PING 192.168.31.10 (192.168.31.10) from 192.168.10.10: 56 data bytes
64 bytes from 192.168.31.10: icmp_seq=0 ttl=249 time=1.353 ms
64 bytes from 192.168.31.10: icmp_seq=1 ttl=249 time=1.129 ms
64 bytes from 192.168.31.10: icmp_seq=2 ttl=249 time=1.014 ms
64 bytes from 192.168.31.10: icmp_seq=3 ttl=249 time=1.485 ms
64 bytes from 192.168.31.10: icmp_seq=4 ttl=249 time=1.347 ms

--- 192.168.31.10 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.014/1.265/1.485 ms
[redacted]
```

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