



IPN 全体での QoS の保持

- [QoS and Global DSCP Policy, on page 1](#)
- [DSCP ポリシーの注意事項と制限事項 \(1 ページ\)](#)
- [Configuring Global DSCP Policy, on page 2](#)
- [Set QoS Level for EPGs and Contracts, on page 4](#)

QoS and Global DSCP Policy

Cisco ACI Quality of Service (QoS) feature allows you to classify the network traffic in your fabric and then to prioritize and police the traffic flow to help avoid congestion in your network. When traffic is classified within the fabric, it is assigned a QoS Priority Level, which is then used throughout the fabric to provide the most desirable flow of packets through the network.

This release of Nexus Dashboard Orchestrator supports configuration of QoS level based on source EPG or a specific Contract. Additional options are available in each fabric directly. You can find detailed information on ACI QoS in [Cisco APIC and QoS](#).

When traffic is sent and received within the Cisco ACI fabric, the QoS Level is determined based on the CoS value of the VXLAN packet's outer header. In certain use cases, such as multi-pod or remote leaf topologies, the traffic must transit an intersite network, where devices that are not under Cisco APIC's management may modify the CoS values in the packets. In these cases you can preserve the ACI QoS Level between parts of the same fabric or different fabrics by creating a mapping between the Cisco ACI QoS level and the DSCP value within the packet.

DSCP ポリシーの注意事項と制限事項

グローバル DSCP 変換ポリシーを設定する場合は、次の注意事項が適用されます。



(注) SD-WAN 統合とともにグローバル DSCP 変換ポリシーを使用する場合は、この章をスキップし、注意事項と制限事項の完全なリストを含むすべての情報について、[SD-WAN の統合](#) 章を参照してください。

- グローバル DSCP ポリシーは、オンプレミス サイトでのみサポートされます。

- グローバル DSCP ポリシーを定義する場合は、QoS レベルごとに一意の値を選択する必要があります。
- QoS レベルを割り当てる場合、特定のコントラクトまたは EPG 全体に割り当てることができます。

特定のトラフィックに複数の QoS レベルを適用できる場合は、次の優先順位を使用して 1 つだけが適用されます。

- コントラクト QoS レベル：コントラクトで QoS が有効になっている場合は、コントラクトで指定された QoS レベルが使用されます。
- 送信元 EPG QoS レベル：コントラクトに QoS レベルが指定されていない場合、送信元 EPG に設定された QoS レベルが使用されます。
- デフォルトの QoS レベル：QoS レベルが指定されていない場合、トラフィックにはデフォルトでレベル 3 の QoS クラスが割り当てられます。

Configuring Global DSCP Policy

When traffic is sent and received within a Cisco ACI fabric, it is prioritized based on the ACI QoS Level, which is determined based on the CoS value of the VXLAN packet's outer header. When traffic exits the ACI fabric towards an intersite network, for example in multi-pod and remote leaf topologies, the QoS level is translated into a DSCP value which is included in the outer header of the VXLAN-encapsulated packet.

This section describes how to define the DSCP translation policy for traffic entering or exiting ACI fabric. This is required when traffic must transit through non-ACI networks, where devices that are not under Cisco APIC's management may modify the CoS values in the transiting packets.

Before you begin

- You should be familiar with Quality of Service (QoS) functionality within ACI fabrics. QoS is described in more detail in [Cisco APIC and QoS](#).

ステップ 1 Log in to your Cisco Nexus Dashboard Orchestrator GUI.

ステップ 2 Open the global DSCP policy configuration screen.

Multi-Site Orchestrator

Policies

Filter by attributes

Name	Type
Global DSCP Policy	cos-dscp

- Navigate to **Application Management** > **Policies**.
- Click **Global DSCP Policy** name.

The **Edit Policy** window will open.

ステップ 3 Update the global DSCP policy.

Edit Policy

Settings

User Level 1	Default SLA (43)
User Level 2	Voice-And-Video SLA (42)
User Level 3	Bulk-Data SLA (45)
User Level 4	2
User Level 5	CS7
User Level 6	AF13 high drop

Control Plane Traffic	AF12 medium drop
Policy Plane Traffic	AF33 high drop
SPAN Traffic	AF31 low drop
Traceroute Traffic	Expedited Forwarding

Associated Sites

Site	Translation Policy State
Site1 4.2(2.66a)	Enabled
site2 4.2(3)	Enabled

Save & Deploy

- Choose the DSCP value for each ACI QoS level.

Each dropdown contains the default list of available DSCP values. You must choose a unique DSCP value for each level.

- b) Choose the sites where you want to deploy the policy.

We recommend deploying the policy to all sites that are part of the Multi-Site domain in order to achieve a consistent end-to-end QoS behavior.

- c) Choose whether you want to enable the policy on each site when it is deployed.

- d) Click **Save & Deploy**.

After you save and deploy, the DSCP policy settings will be pushed to each site. You can verify the configuration by logging in to the site's APIC and navigating to **Tenants > infra > Policies > Protocol > DSCP class-CoS translation policy for L3 traffic**.

What to do next

After you have defined the global DSCP policy, you can assign the ACI QoS Levels to EPGs or Contracts as described in [Set QoS Level for EPGs and Contracts, on page 4](#).

Set QoS Level for EPGs and Contracts

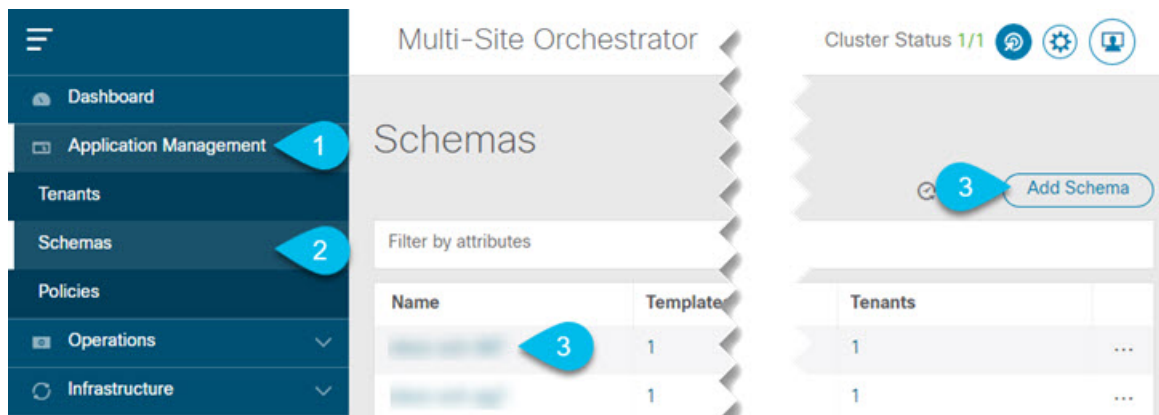
This section describes how to choose an ACI QoS level for traffic in your fabrics. You can choose to specify QoS for individual Contracts or entire EPGs.

Before you begin

- You must have defined the global DSCP policy, as described in [Configuring Global DSCP Policy, on page 2](#).
- You should be familiar with Quality of Service (QoS) functionality within ACI fabrics. QoS is described in more detail in [Cisco APIC and QoS](#).

ステップ 1 Log in to your Cisco Nexus Dashboard Orchestrator GUI.

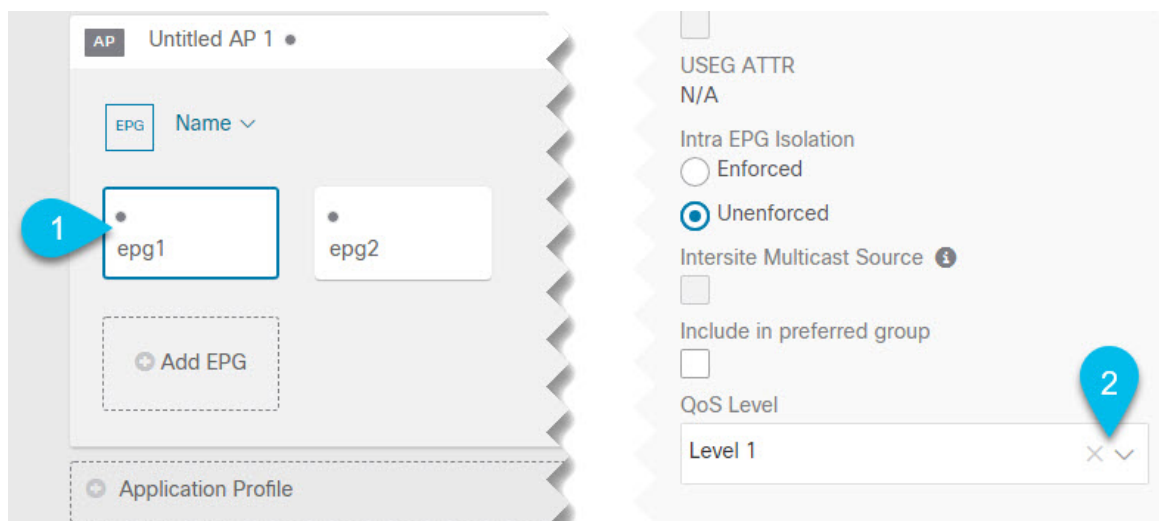
ステップ 2 Choose the Schema you want to edit.



- Navigate to **Application Management > Schemas >**.
- Click the name of the schema you want to edit or **Add Schema** to create a new one.

The **Edit Policy** window will open.

ステップ 3 Pick a QoS Level for an EPG



- In the main pane, scroll down to the **EPG** area and select an EPG or click **Add EPG** to create a new one.
- In the right sidebar, scroll down to the **QoS Level** dropdown and choose the QoS Level you want to assign to the EPG.

ステップ 4 Pick a QoS Level for an EPG

The screenshot displays the configuration interface for setting QoS levels. On the left, the 'CONTRACT' section is highlighted with a blue callout '1'. It shows a list of contracts with 'c1' selected. Below it, the 'VRF' section shows 'vrf1'. On the right, the 'ON-PREMISES PROPERTIES' section is highlighted with a blue callout '2'. It shows the 'QoS Level' dropdown menu set to 'Level 1'. The 'Filter Chain' section shows a table with one entry: 't1' with a 'Directive' of 'none'. The 'Service Graph' dropdown is set to 'Select or find an item here'.

Name	Directive
t1	none

QoS Level
Level 1

- In the main pane, scroll down to the **Contract** area and select a Contract or click the + icon to create a new one.
- In the right sidebar, scroll down to the **QoS Level** dropdown and choose the QoS Level you want to assign to the Contract.