在Firepower威胁防御上配置NetFlow安全事件记录

目录

简介

本文档介绍如何通过Firepower管理中心(FMC)在Firepower威胁防御(FTD)上配置NetFlow安全事件记录(NSEL)。

先决条件

要求

Cisco 建议您了解以下主题：

- FMC知识
- FTD知识
- FlexConfig策略知识

使用的组件

本文档中的信息基于以下软件和硬件版本：

- FTD版本6.6.1
- FMC版本6.6.1

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

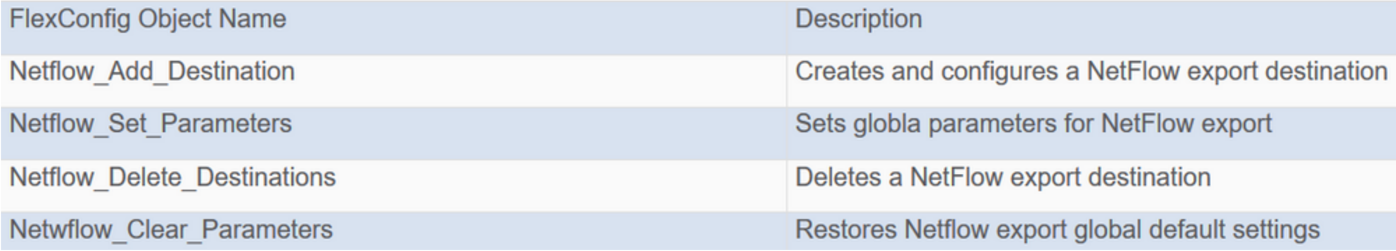
背景信息

本文档介绍如何通过Firepower管理中心(FMC)在Firepower威胁防御(FTD)上配置NetFlow安全事件记录(NSEL)。

FlexConfig文本对象与预定义FlexConfig对象中使用的变量相关联。预定义的FlexConfig对象和关联的文本对象可在FMC中找到，以配置NSEL。FMC中有四个预定义的FlexConfig对象和三个预定义的文本对象。预定义的FlexConfig对象是只读的，不能修改。为了修改NetFlow的参数，可以复制对

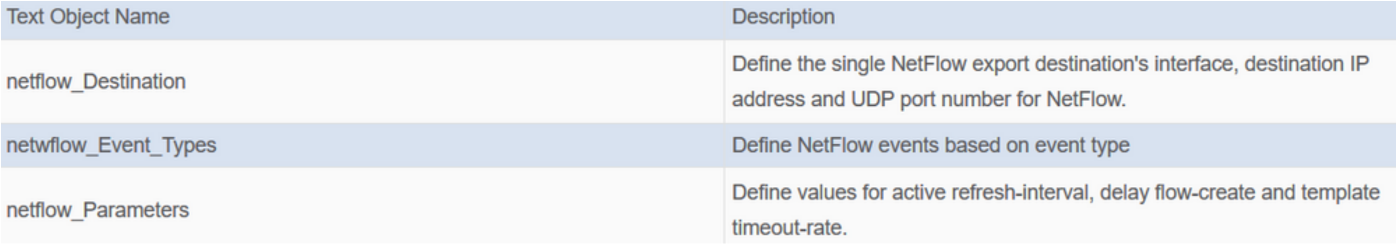
象。

表中列出了四个预定义对象：



FlexConfig Object Name	Description
Netflow_Add_Destination	Creates and configures a NetFlow export destination
Netflow_Set_Parameters	Sets globla parameters for NetFlow export
Netflow_Delete_Destinations	Deletes a NetFlow export destination
Netwflow_Clear_Parameters	Restores Netflow export global default settings

表格中列出了三个预定义文本对象：



Text Object Name	Description
netflow_Destination	Define the single NetFlow export destination's interface, destination IP address and UDP port number for NetFlow.
netwflow_Event_Types	Define NetFlow events based on event type
netflow_Parameters	Define values for active refresh-interval, delay flow-create and template timeout-rate.

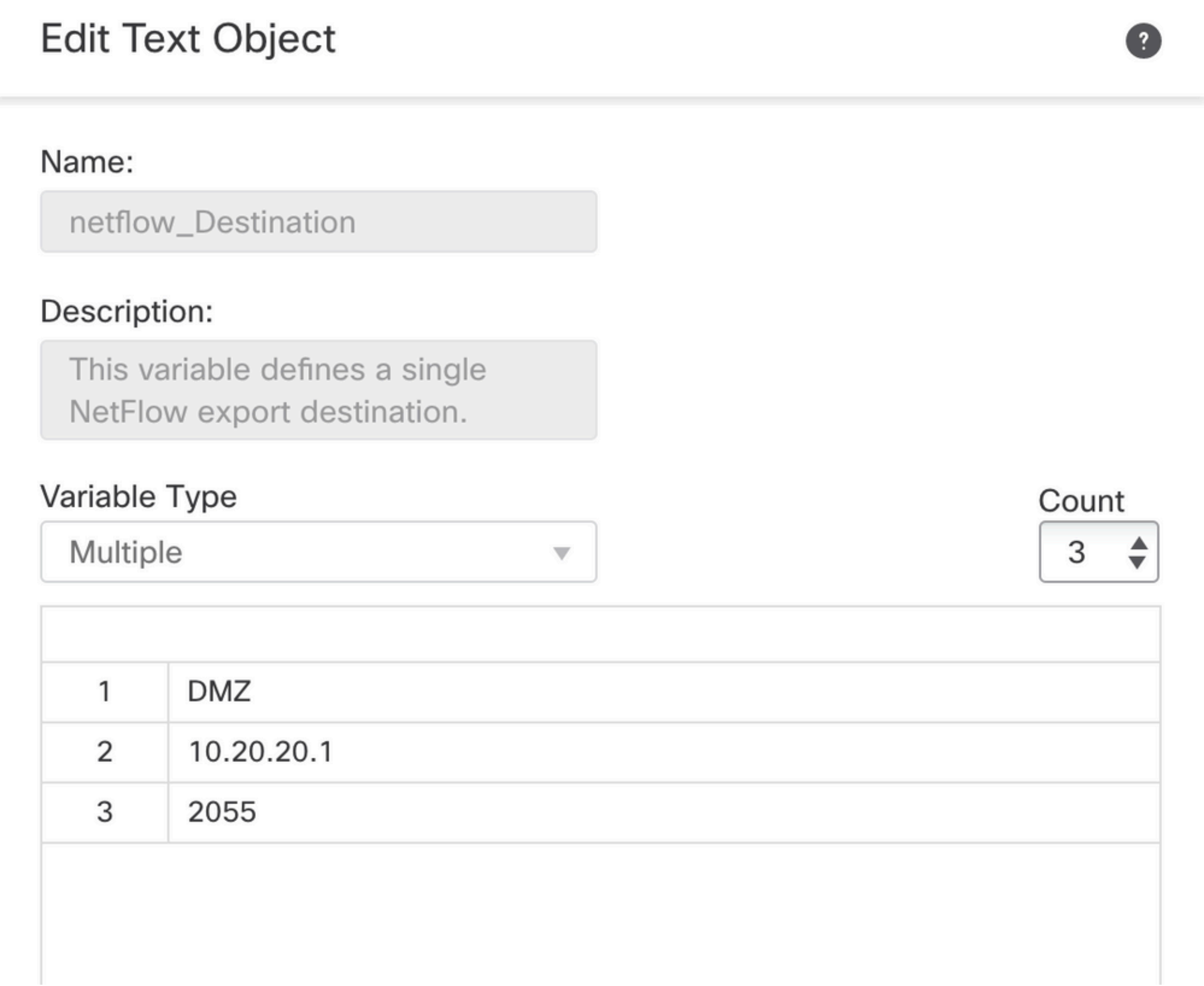
配置

本节介绍如何通过FlexConfig策略在FMC上配置NSEL。

步骤1:设置Netflow的文本对象的参数。

要设置变量参数，请导航到**对象> FlexConfig >文本对象**。编辑netflow_Destination对象。定义多变量类型和计数设置为3。设置接口名称、目标IP地址和端口。

在此配置示例中，接口为DMZ，NetFlow收集器IP地址为10.20.20.1,UDP端口为2055。



Edit Text Object

Name:

netflow_Destination

Description:

This variable defines a single NetFlow export destination.

Variable Type

Multiple

Count

3

1	DMZ
2	10.20.20.1
3	2055

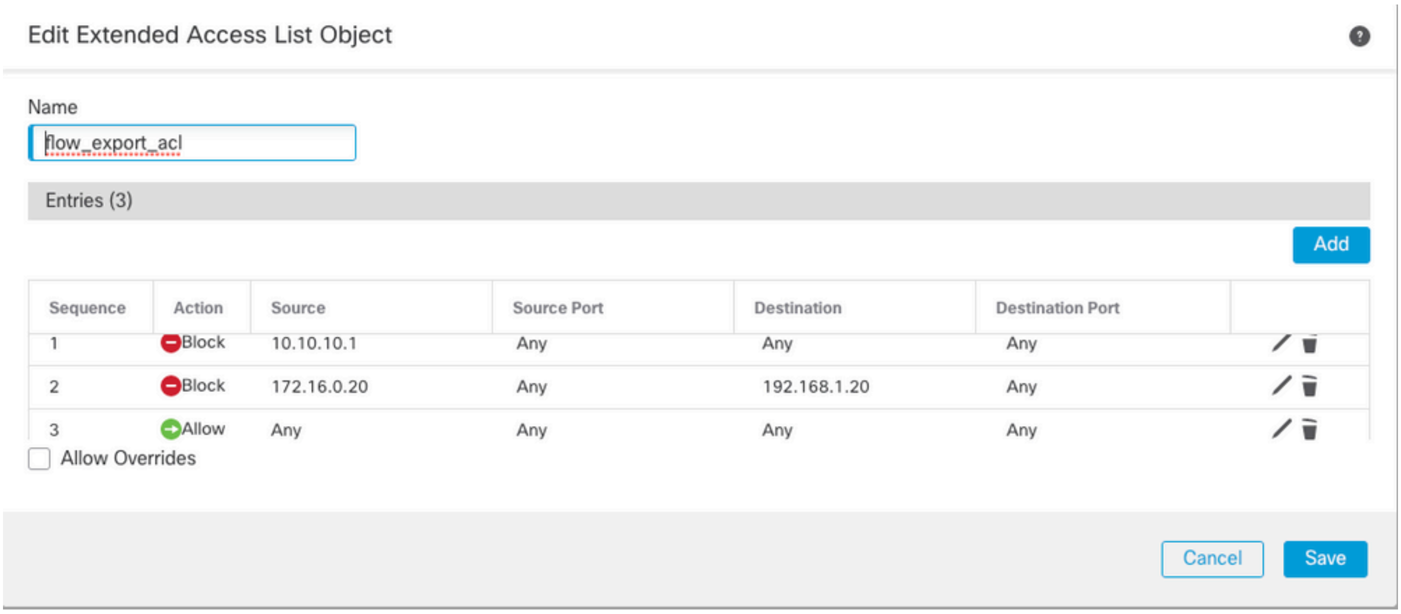
注：使用netflow_Event_Types和netflow_Parameters的默认值。

第二步：配置扩展访问列表对象以匹配特定流量。

要在FMC上创建扩展访问列表，请导航至 **Objects > Object Management** 在左侧菜单下， **访问列表** 选择 **扩展。**点击 **添加扩展访问列表。**

填写**Name**字段。在本示例中，名称为flow_export_acl。单击 **Add 按钮。**配置访**问控制**条目以匹配特定流量。

在本示例中，从主机10.10.10.1到任何目的地的流量以及主机172.16.0.20和192.168.1.20之间的流量均被排除。包括任何其他流量。


Edit Extended Access List Object

Name

flow_export_acl

Entries (3)

Sequence	Action	Source	Source Port	Destination	Destination Port
1	Block	10.10.10.1	Any	Any	Any
2	Block	172.16.0.20	Any	192.168.1.20	Any
3	Allow	Any	Any	Any	Any

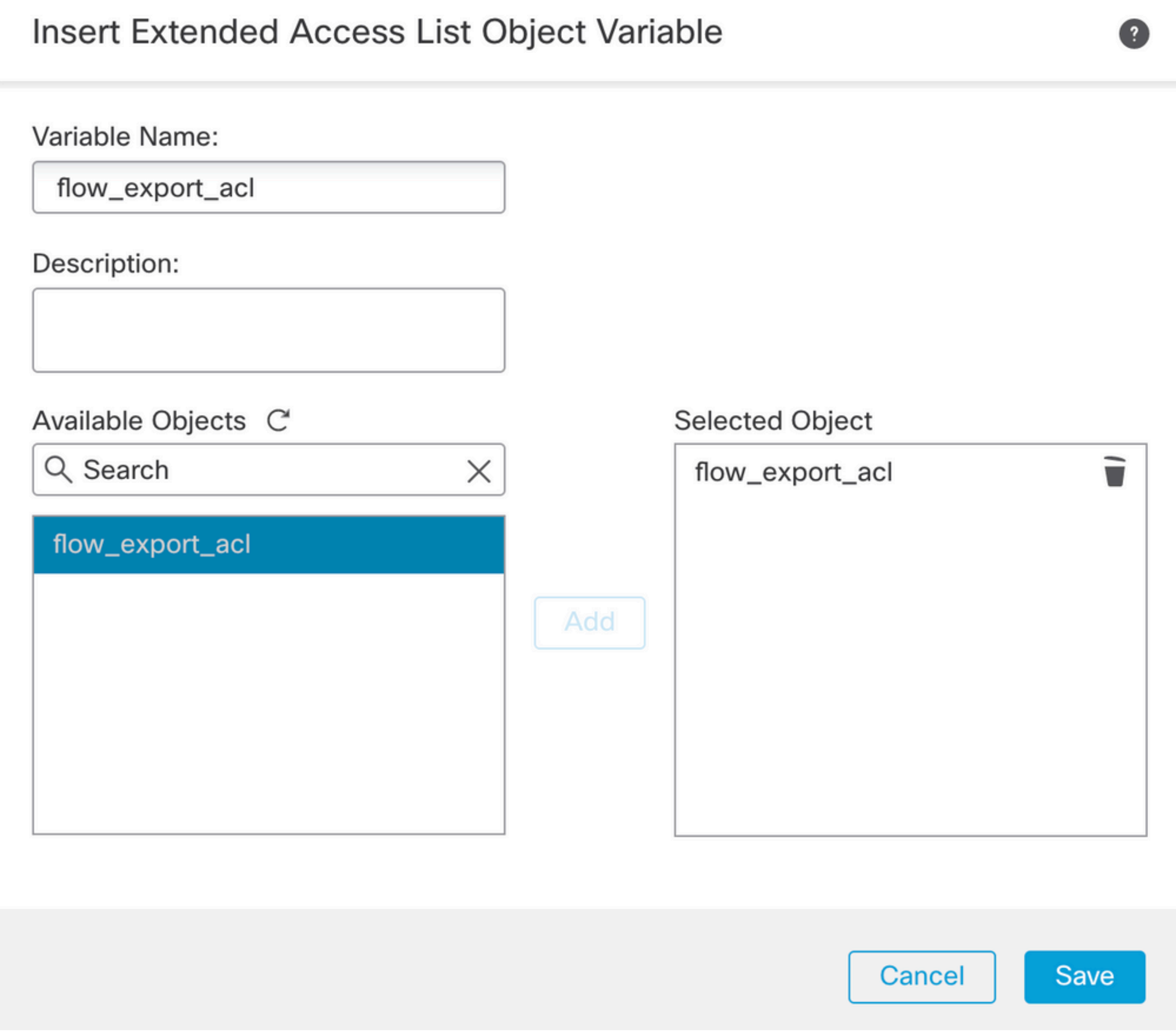
□ Allow Overrides

第三步：配置FlexConfig对象。

要配置FlexConfig对象，请导航到**对象** > **FlexConfig** > **FlexConfig**对象，然后单击**添加FlexConfig对象**按钮。

定义标识需要为其导出NetFlow事件的流量的类映射。 在本示例中，对象的名称为 flow_export_class。

选择步骤2中创建的访问列表。单击**Insert** > **Insert Policy Object** > **Extended ACL Object**，并分配名称。然后，单击**Add**按钮。在本示例中，变量的名称为flow_export_acl。Click **Save**.



Insert Extended Access List Object Variable

Variable Name: flow_export_acl

Description:

Available Objects: flow_export_acl

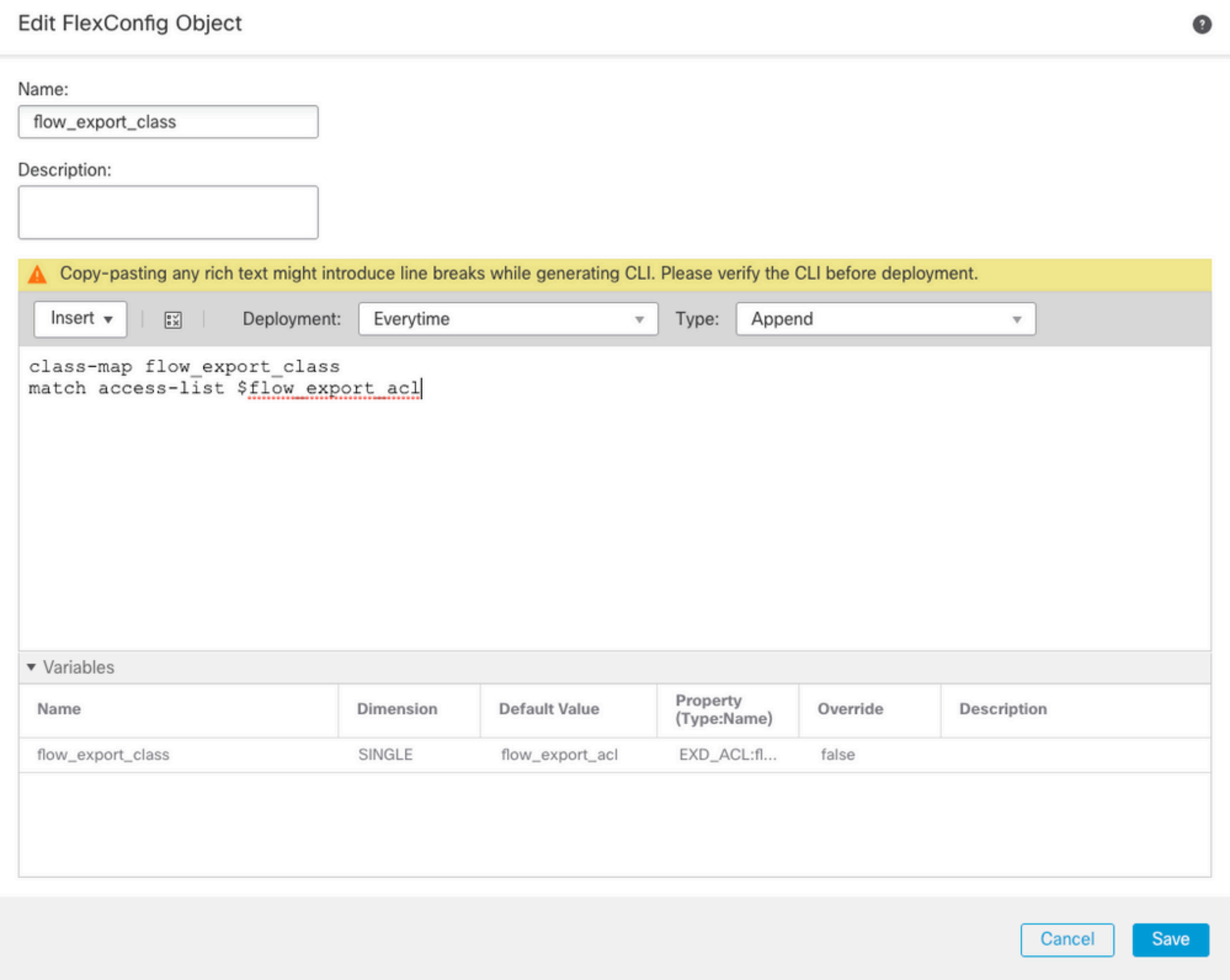
Selected Object: flow_export_acl

在右侧的空白字段中添加后续配置行，并在match access-list配置行中包含以前定义的变量($**flow_export_acl**.)。

请注意，**$** 符号以变量名称开头。这有助于定义变量紧跟在它之后。

```
class-map flow_export_class
match access-list $flow_export_acl
```

完成后单击**Save**。



Name: flow_export_class

Description:

Copy-pasting any rich text might introduce line breaks while generating CLI. Please verify the CLI before deployment.

Deployment: Everytime

Type: Append

```
class-map flow_export_class
match access-list $flow_export_acl
```

Variables

Name	Dimension	Default Value	Property (Type:Name)	Override	Description
flow_export_class	SINGLE	flow_export_acl	EXD_ACL:fl...	false	

第四步：配置Netflow目标

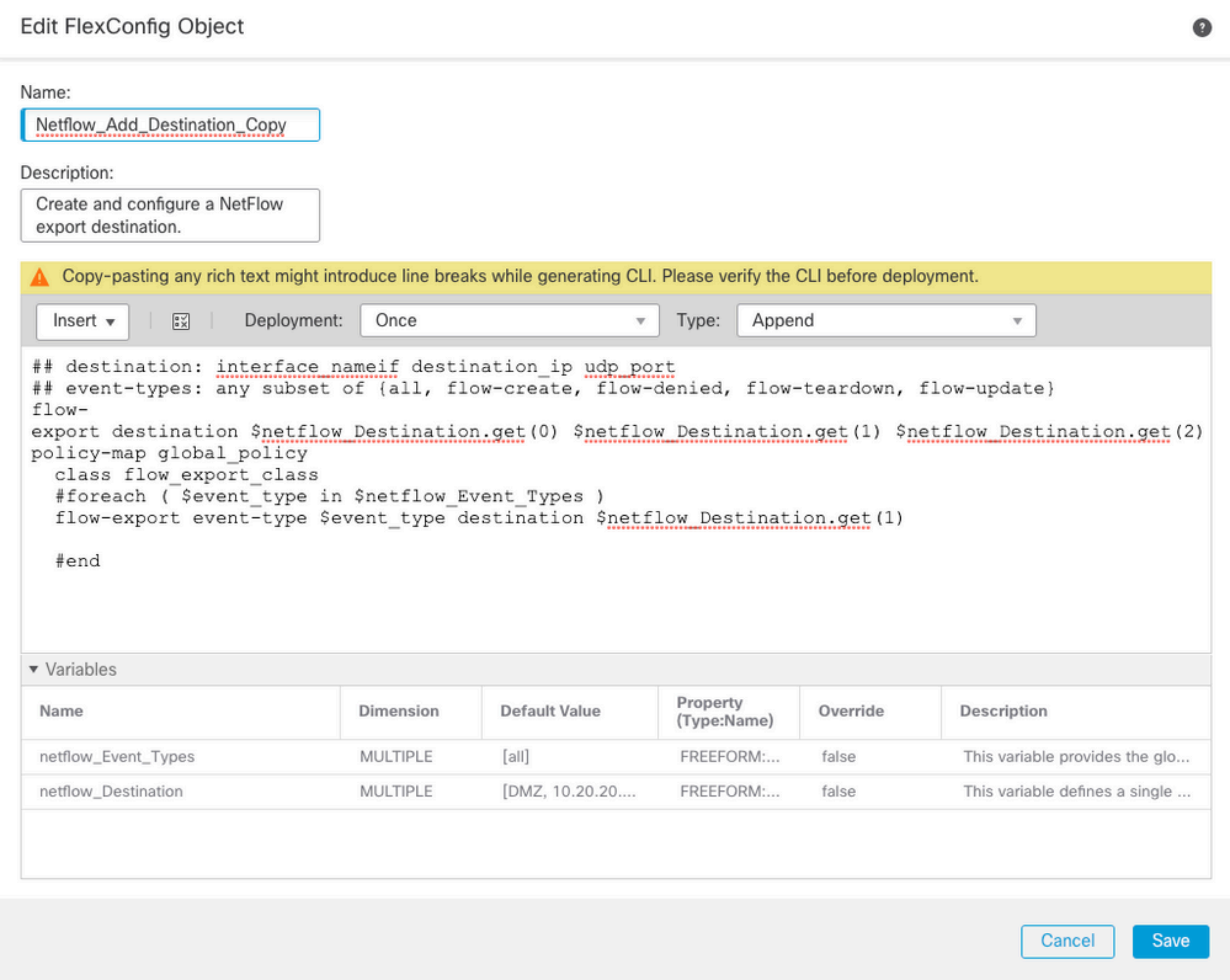
要配置Netflow目标，请导航到**对象 > FlexConfig > FlexConfig**对象并按Netflow进行过滤。**复制对象Netflow_Add_Destination。**系统将创建Netflow_Add_Destination_Copy。

分配在步骤3中创建的类。可以创建新的策略映射以将流导出操作应用于已定义的类。

在本示例中，类插入到当前策略（全局策略）中。

```
## destination: interface_nameif destination_ip udp_port
## event-types: any subset of {all, flow-create, flow-denied, flow-teardown, flow-update}
flow-
export destination $netflow_Destination.get(0) $netflow_Destination.get(1) $netflow_Destination.
get(2)
policy-map global_policy
  class flow_export_class
  #foreach ( $event_type in $netflow_Event_Types )
  flow-export event-type $event_type destination $netflow_Destination.get(1)
  #end
```

完成后单击**Save**。



Edit FlexConfig Object

Name: Netflow_Add_Destination_Copy

Description: Create and configure a NetFlow export destination.

Copy-pasting any rich text might introduce line breaks while generating CLI. Please verify the CLI before deployment.

Deployment: Once

Type: Append

```
## destination: interface_nameif destination_ip udp_port
## event-types: any subset of {all, flow-create, flow-denied, flow-teardown, flow-update}
flow-
export destination $netflow_Destination.get(0) $netflow_Destination.get(1) $netflow_Destination.get(2)
policy-map global_policy
  class flow_export_class
  #foreach ( $event_type in $netflow_Event_Types )
  flow-export event-type $event_type destination $netflow_Destination.get(1)

  #end
```

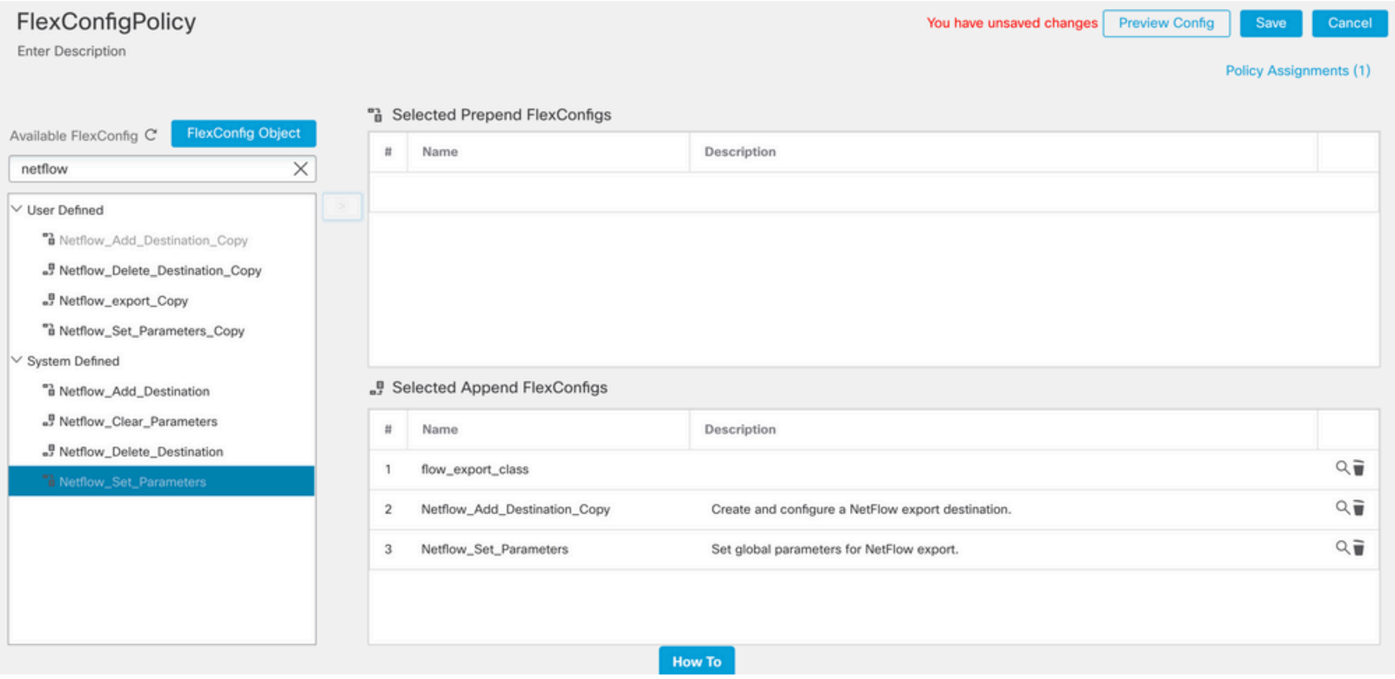
Variables

Name	Dimension	Default Value	Property (Type:Name)	Override	Description
netflow_Event_Types	MULTIPLE	[all]	FREEFORM:...	false	This variable provides the glo...
netflow_Destination	MULTIPLE	[DMZ, 10.20.20....	FREEFORM:...	false	This variable defines a single ...

第五步：将FlexConfig策略分配到FTD

导航到**设备(Devices)> FlexConfig**并创建一个新策略（除非已经有一个策略为其他用途创建并分配给同一FTD）。在本示例中，已创建FlexConfig。编辑FlexConfig策略并**选**择在以上步骤中创建的FlexConfig对象。

在本示例中，使用默认Netflow导出参数，因此选择Netflow_Set_Parameters。 **保存更改并部署。**



FlexConfigPolicy

Enter Description

You have unsaved changes

netflow

- User Defined
  - Netflow_Add_Destination_Copy
  - Netflow_Delete_Destination_Copy
  - Netflow_export_Copy
  - Netflow_Set_Parameters_Copy
- System Defined
  - Netflow_Add_Destination
  - Netflow_Clear_Parameters
  - Netflow_Delete_Destination
  - Netflow_Set_Parameters

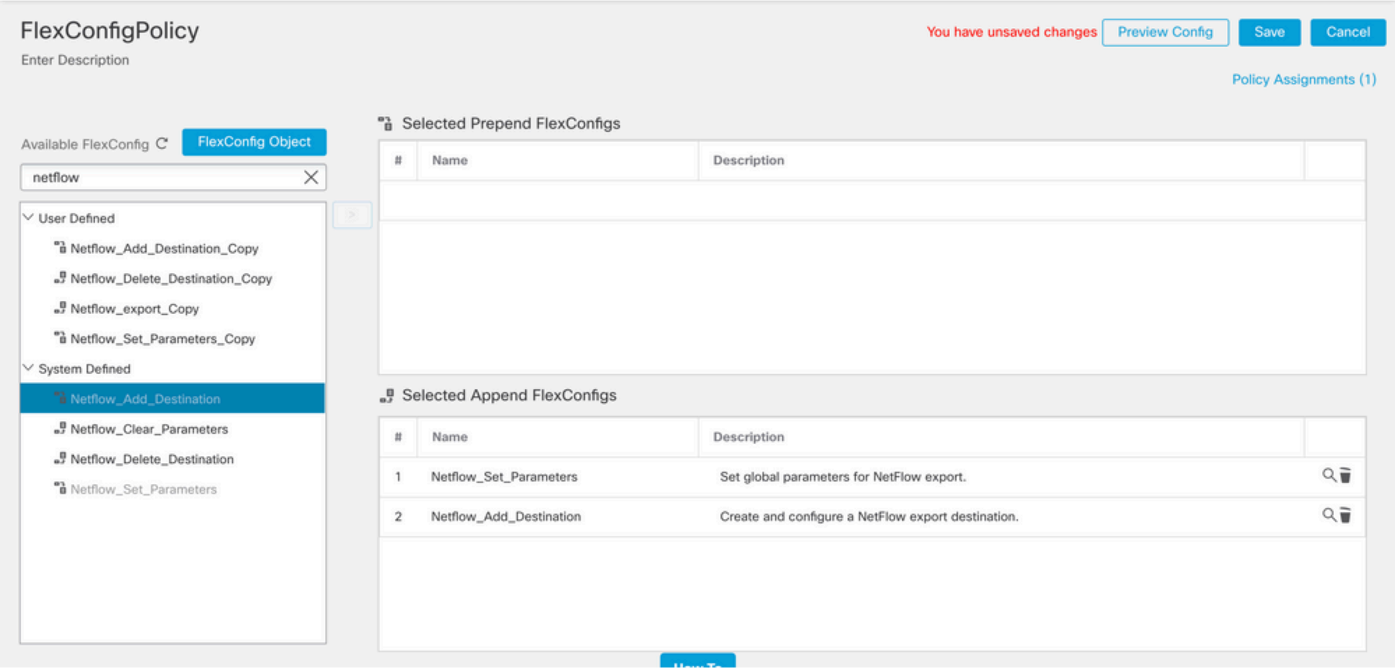
Selected Prepend FlexConfigs

#	Name	Description

Selected Append FlexConfigs

#	Name	Description
1	flow_export_class	
2	Netflow_Add_Destination_Copy	Create and configure a NetFlow export destination.
3	Netflow_Set_Parameters	Set global parameters for NetFlow export.

注意：为了匹配所有流量而无需匹配特定流量，您可以从步骤2到步骤4跳过，并使用预定义的NetFlow对象。



FlexConfigPolicy

Enter Description

You have unsaved changes

netflow

- User Defined
  - Netflow_Add_Destination_Copy
  - Netflow_Delete_Destination_Copy
  - Netflow_export_Copy
  - Netflow_Set_Parameters_Copy
- System Defined
  - Netflow_Add_Destination
  - Netflow_Clear_Parameters
  - Netflow_Delete_Destination
  - Netflow_Set_Parameters

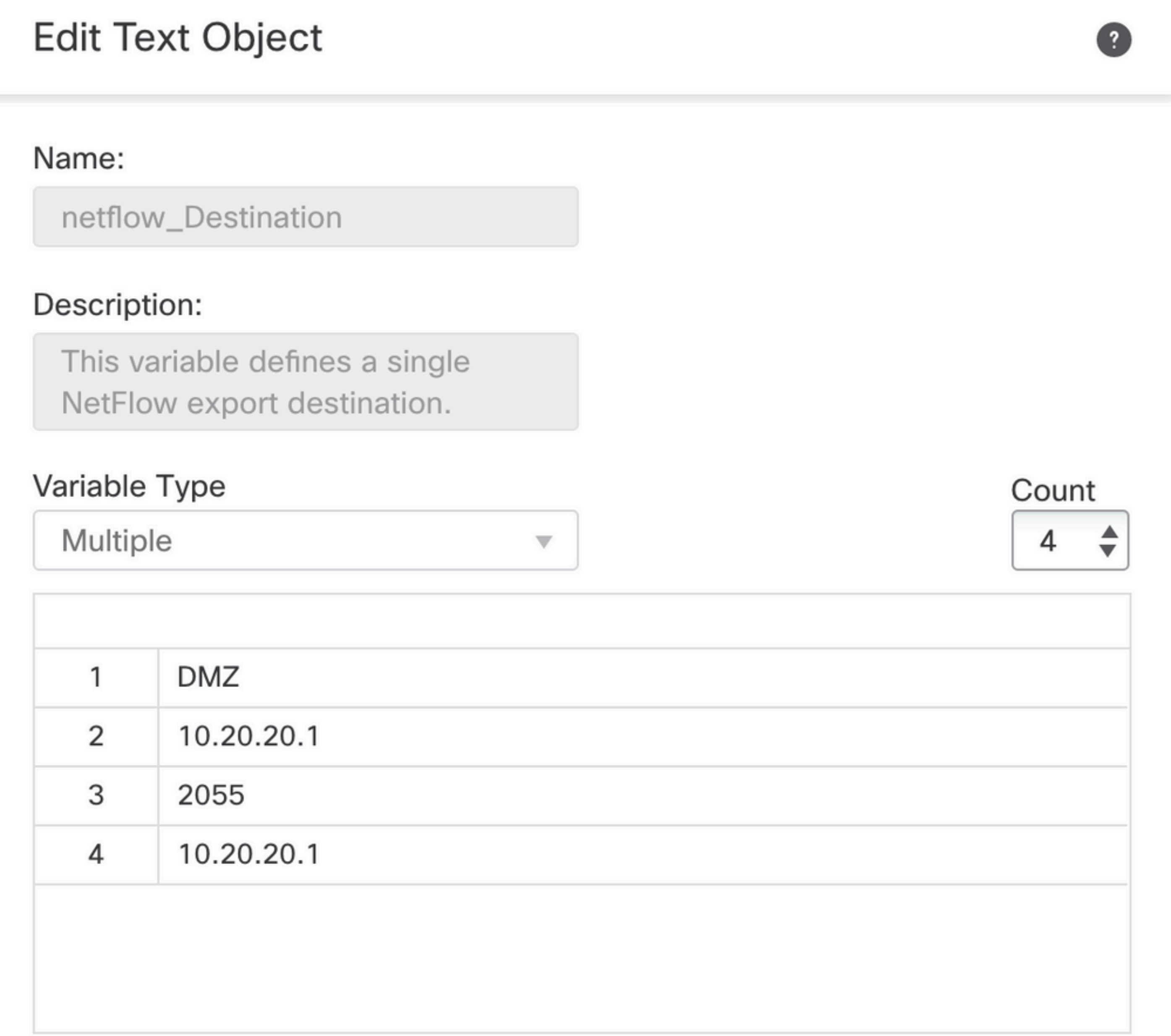
Selected Prepend FlexConfigs

#	Name	Description

Selected Append FlexConfigs

#	Name	Description
1	Netflow_Set_Parameters	Set global parameters for NetFlow export.
2	Netflow_Add_Destination	Create and configure a NetFlow export destination.

注意：添加第二个NSEL收集器，向其发送NetFlow数据包。在第1步中，添加4个变量以添加第二个Netflow收集器IP地址。



Edit Text Object

Name:

netflow_Destination

Description:

This variable defines a single NetFlow export destination.

Variable Type

Multiple

Count

4

1	DMZ
2	10.20.20.1
3	2055
4	10.20.20.1

在第4步中，添加配置行：flow-export destination $netflow_Destination.get(0)$netflow_Destination.get(1)$netflow_Destination.get(2)

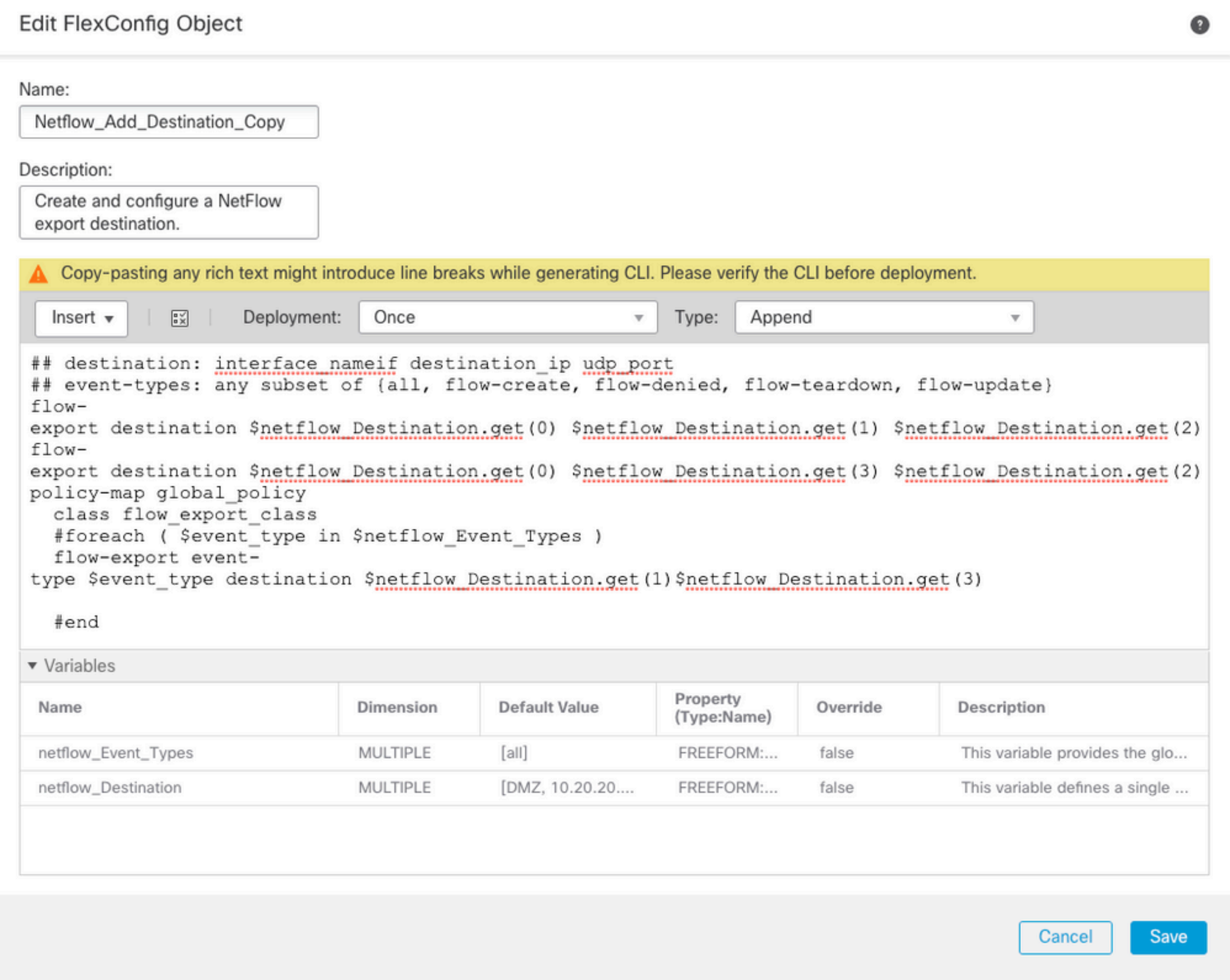
编辑对应变量的变量$netflow_Destination.get。在本示例中，变量值为3。例如：

```
flow-export destination $netflow_Destination.get(0) $netflow_Destination.get(1) $netflow_Destination.get(2)
flow-export destination $netflow_Destination.get(0) $netflow_Destination.get(3) $netflow_Destination.get(2)
```

此外，在配置行中添加第二个变量$netflow_Destination.get: flow-export event-type $event_type destination $netflow_Destination.get(1)。例如：

```
flow-export event-type $event_type destination $netflow_Destination.get(1) $netflow_Destination.get(3)
```

如下图所示验证此配置：



Edit FlexConfig Object

Name: Netflow_Add_Destination_Copy

Description: Create and configure a NetFlow export destination.

Copy-pasting any rich text might introduce line breaks while generating CLI. Please verify the CLI before deployment.

Deployment: Once

Type: Append

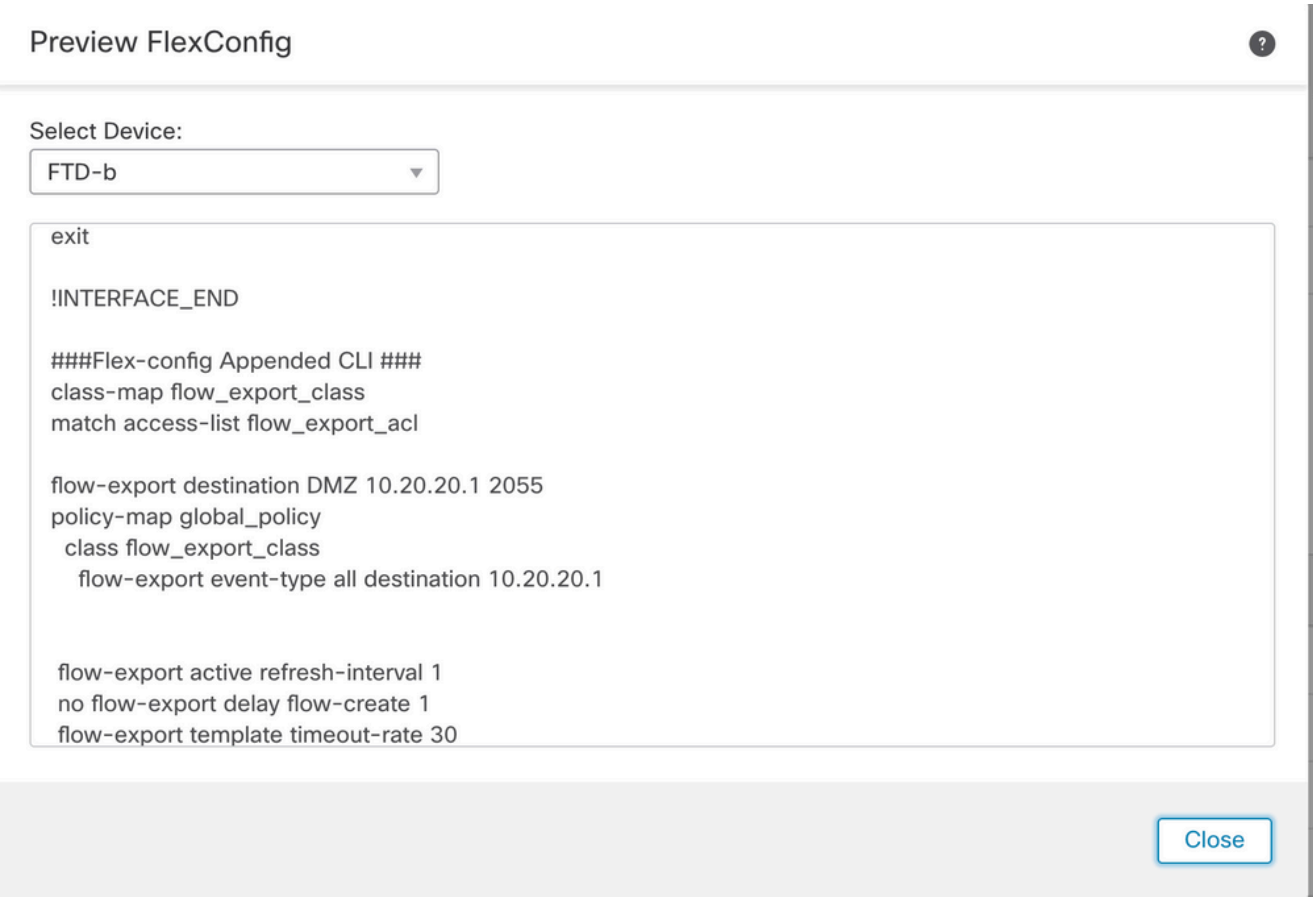
```
## destination: interface_nameif destination_ip udp_port
## event-types: any subset of {all, flow-create, flow-denied, flow-teardown, flow-update}
flow-
export destination $netflow_Destination.get(0) $netflow_Destination.get(1) $netflow_Destination.get(2)
flow-
export destination $netflow_Destination.get(0) $netflow_Destination.get(3) $netflow_Destination.get(2)
policy-map global_policy
  class flow_export_class
  #foreach ( $event_type in $netflow_Event_Types )
  flow-export event-
type $event_type destination $netflow_Destination.get(1)$netflow_Destination.get(3)

  #end
```

Variables

Name	Dimension	Default Value	Property (Type:Name)	Override	Description
netflow_Event_Types	MULTIPLE	[all]	FREEFORM:...	false	This variable provides the glo...
netflow_Destination	MULTIPLE	[DMZ, 10.20.20....	FREEFORM:...	false	This variable defines a single ...

验证

可以在FlexConfig策略中验证NetFlow配置。要预览配置，请单击**Preview Config**。**选**择FTD并检验配置。



```
exit

!INTERFACE_END

###Flex-config Appended CLI ###
class-map flow_export_class
match access-list flow_export_acl

flow-export destination DMZ 10.20.20.1 2055
policy-map global_policy
  class flow_export_class
    flow-export event-type all destination 10.20.20.1


 flow-export active refresh-interval 1
 no flow-export delay flow-create 1
 flow-export template timeout-rate 30
```

通过安全外壳(SSH)访问FTD，并使用命令system support diagnostic-cli并运行以下命令：

```
> system support diagnostic-cli
Attaching to Diagnostic CLI ... Press 'Ctrl+a then d' to detach.
Type help or '?' for a list of available commands.

firepower# show access-list flow_export_acl
access-list flow_export_acl; 3 elements; name hash: 0xe30f1adf
access-list flow_export_acl line 1 extended deny object-group ProxySG_ExtendedACL_34359742097
object 10.10.10.1 any (hitcnt=0) 0x8edff419
access-list flow_export_acl line 1 extended deny ip host 10.10.10.1 any (hitcnt=0) 0x3d4f23a4
access-list flow_export_acl line 2 extended deny object-group ProxySG_ExtendedACL_34359742101
object 172.16.0.20 object 192.168.1.20 (hitcnt=0) 0x0ec22ecf
access-list flow_export_acl line 2 extended deny ip host 172.16.0.20 host 192.168.1.20
(hitcnt=0) 0x134aaeea
access-list flow_export_acl line 3 extended permit object-group ProxySG_ExtendedACL_30064776111
any any (hitcnt=0) 0x3726277e
access-list flow_export_acl line 3 extended permit ip any any (hitcnt=0) 0x759f5ecf

firepower# sh running-config class-map flow_export_class
class-map flow_export_class
match access-list flow_export_acl

firepower# show running-config policy-map
!
policy-map type inspect dns preset_dns_map
parameters
message-length maximum client auto
message-length maximum 512
no tcp-inspection
policy-map type inspect ip-options UM_STATIC_IP_OPTIONS_MAP
```

```
parameters
eool action allow
nop action allow
router-alert action allow
policy-map global_policy
class inspection_default
inspect dns preset_dns_map
inspect ftp
inspect h323 h225
inspect h323 ras
inspect rsh
inspect rtsp
inspect sqlnet
inspect skinny
inspect sunrpc
inspect xdmcp
inspect sip
inspect netbios
inspect tftp
inspect icmp
inspect icmp error
inspect ip-options UM_STATIC_IP_OPTIONS_MAP
inspect snmp
class flow_export_class
flow-export event-type all destination 10.20.20.1
class class-default
set connection advanced-options UM_STATIC_TCP_MAP

firepower# show running-config | include flow
access-list flow_export_acl extended deny object-group ProxySG_ExtendedACL_34359742097 object
10.10.10.1 any
access-list flow_export_acl extended deny object-group ProxySG_ExtendedACL_34359742101 object
172.16.0.20 object 192.168.1.20
access-list flow_export_acl extended permit object-group ProxySG_ExtendedACL_30064776111 any any
flow-export destination DMZ 10.20.20.1 2055
class-map flow_export_class
match access-list flow_export_acl
class flow_export_class
flow-export event-type all destination 10.20.20.1
```

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