



## CHAPTER 25

# TrafficStormControlApp Service

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This chapter describes the DCNM web services' API methods for the TrafficStormControlApp service.

## Information About TrafficStormControlApp Service

This chapter defines the APIs exposed by the traffic storm control service feature.

### disableBroadcastStormControlInInterfaces

Disables broadcast storm control in a collection of interfaces, given the InstanceNameId of the interfaces. If BroadcastSuppressionCapability is specified as None in the Portcapability object of an interface, those interfaces will not have traffic storm control configurations, though they are of type SwitchedNetworkInterface or RoutedNetworkInterface. Enabling/Disabling traffic storm control is not possible in those interfaces.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed interfaceInstanceNameIds is null or it is not a valid interface InstanceNameId.
- If the interface does not exist in the database.

PropertiesException is thrown if the BroadcastSuppression capability of the given interface is None.

#### Parameters

opContext— Operational context.

interfaceInstanceNameIds— A collection of InstanceNameId of interfaces in which broadcast storm control has to be disabled.

#### Return Value

void

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## disableMulticastStormControlInInterfaces

Disables multicast storm control in a collection of interfaces, given the InstanceNameId of the interfaces. If BroadcastSuppressionCapability is specified as None in the Portcapability object of an interface, those interfaces will not have traffic storm control configurations, though they are of type SwitchedNetworkInterface or RoutedNetworkInterface. Enabling/Disabling traffic storm control is not possible in those interfaces.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed interfaceInstanceNameIds is null or it is not a valid interface InstanceNameId.
- If the interface does not exist in the database.

PropertiesException is thrown if the BroadcastSuppression capability of the given interface is None.

### Parameters

opContext— Operational context.

interfaceInstanceNameIds— A collection of InstanceNameId of interfaces in which multicast storm control has to be disabled.

### Return Value

void

## disableStormControlInInterfaces

Disables storm control for all three types of traffics (unicast, broadcast, or multicast) in a given collection of interfaces. If BroadcastSuppressionCapability is specified as None in the Portcapability object of an interface, those interfaces will not have traffic storm control configurations, though they are of type SwitchedNetworkInterface or RoutedNetworkInterface. Enabling/Disabling traffic storm control is not possible in those interfaces.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed interfaceInstanceNameIds is null or empty
- If any of the element in interfaceInstanceNameIds is not a valid interfaceInstanceNameId.
- If the interface does not exist in the database.

### Parameters

opContext— Operational context.

interfaceInstanceNameId— InstanceNameId of the interfaces in which storm control for all three traffic types(unicast, broadcast and multicast) is to be disabled.

### Return Value

void

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## disableUnicastStormControlInInterfaces

Disables unicast storm control in a collection of interfaces, given the InstanceNameId of the interfaces. If BroadcastSuppressionCapability is specified as None in the Portcapability object of an interface, those interfaces will not have traffic storm control configurations, though they are of type SwitchedNetworkInterface or RoutedNetworkInterface. Enabling/Disabling traffic storm control is not possible in those interfaces.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed interfaceInstanceNameIds is null or it is not a valid interface InstanceNameId.
- If the interface does not exist in the database.

PropertiesException is thrown if the BroadcastSuppression capability of the given interface is None.

### Parameters

opContext— Operational context.

interfaceInstanceNameIds— A collection of InstanceNameId of interfaces in which unicast storm control has to be disabled.

### Return Value

void

## enableBroadcastStormControlInInterfaces

Enables broadcast storm control in a collection of interfaces with the given threshold. If BroadcastSuppressionCapability is specified as None in the Portcapability object of an interface, those interfaces will not have traffic storm control configurations, though they are of type SwitchedNetworkInterface or RoutedNetworkInterface. Enabling/Disabling traffic storm control is not possible in those interfaces.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed interfaceInstanceNameIds is null or it is not a valid interface InstanceNameId.
- If the interface does not exist in the database.
- If the threshold value is 100, and traffic storm control for other types (unicast or multicast) were also not enabled already.

PropertiesException is thrown if the BroadcastSuppression capability of the given interface is None.

### Parameters

opContext— Operational context.

interfaceInstanceNameIds— A collection of InstanceNameId of interfaces in which broadcast is to be enabled.

threshold— A Float object indicating the value of storm control threshold. This object shall have a float value less than 100 and greater than 0. This is an optional argument. If this argument is set to null, already configured threshold in the interfaces will be retained.

### Return Value

void

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## enableMulticastStormControlInInterfaces

Enables multicast storm control in a collection of interfaces with the given threshold. If BroadcastSuppressionCapability is specified as None in the Portcapability object of an interface, those interfaces will not have traffic storm control configurations, though they are of type SwitchedNetworkInterface or RoutedNetworkInterface. Enabling/Disabling traffic storm control is not possible in those interfaces.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed interfaceInstanceNameIds is null or it is not a valid interface InstanceNameId.
- If the interface does not exist in the database.
- If the threshold value is 100, and traffic storm control for other types(unicast or broadcast) were also not enabled already.

PropertiesException is thrown if the BroadcastSuppression capability of the given interface is None.

### Parameters

opContext— Operational context.

interfaceInstanceNameIds— A collection of InstanceNameId of interfaces in which \* multicast is to be enabled.

threshold— A Float object indicating the value of storm control threshold. This object shall have a float value less than 100 and greater than 0. This is an optional argument. If this argument is set to null, already configured threshold in the interfaces will be retained.

### Return Value

void

## enableUnicastStormControlInInterfaces

Enables unicast storm control in a collection of interfaces with the given threshold. If BroadcastSuppressionCapability is specified as None in the Portcapability object of an interface, those interfaces will not have traffic storm control configurations, though they are of type SwitchedNetworkInterface or RoutedNetworkInterface. Enabling/Disabling traffic storm control is not possible in those interfaces.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed interfaceInstanceNameIds is null or it is not a valid interface InstanceNameId.
- If the interface does not exist in the database.
- If the threshold value is 100, and traffic storm control for other types(broadcast or multicast) were also not enabled already.

PropertiesException is thrown if the BroadcastSuppression capability of the given interface is None.

### Parameters

opContext— Operational context.

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`interfaceInstanceNameIds`— A collection of `InstanceNameId` of interfaces in which unicast is to enabled.

`threshold`— A `Float` object indicating the value of storm control threshold. This object shall have a float value less than 100 and greater than 0. This is an optional argument. If this argument is set to null, already configured threshold in the interfaces will be retained.

#### Return Value

void

## getInterfacesWithTrafficStormControlSettingInNetwork Element

Returns all the traffic storm control enabled and disabled interfaces in the given network element. An interface is considered to be traffic storm control enabled, if storm control for one or more traffic types (unicast, broadcast or multicast) is enabled in it. If `BroadcastSuppressionCapability` is specified as `None` in the `Portcapability` object of an interface, those interfaces will not have traffic storm control configurations, though they are of type `SwitchedNetworkInterface` or `RoutedNetworkInterface`.

`ValidationException` is thrown if any of the following situations occurs:

- If the argument passed `neInstanceNameId` is null or it is not a valid network element `InstanceNameId`.
- If the network element does not exist in the database.

#### Parameters

`opContext`— Operational context.

`neInstanceNameId`— `InstanceNameId` of the network element.

#### Return Value

A collection of traffic storm control enabled and traffic storm control disabled `NetworkInterface`. The interfaces can be of type `SwitchedNetworkInterface` or `RoutedNetworkInterface`. In the returned list only the following associations will be present and other associations will be cleared.

- Traffic storm control association.
- Network interface name association.

## getTrafficStormControlDisabledInterfacesInNetworkElement

Returns all the interfaces in which traffic storm control is disabled in the given network element. An interface is considered to be traffic storm control disabled, if none of the three traffic types(unicast, broadcast or multicast) is enabled and the threshold is 100. If `BroadcastSuppressionCapability` is specified as `None` in the `Portcapability` object of an interface, those interfaces will not have traffic storm control configurations, though they are of type `SwitchedNetworkInterface` or `RoutedNetworkInterface`. The interfaces whose `BroadcastSuppressionCapability` is `None`, will not be included in the returned list of this API.

`ValidationException` is thrown if any of the following situations occurs:

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- If the argument passed neInstanceId is null or it is not a valid network element InstanceNameId.
- If the network element does not exist in the database.

**Parameters**

opContext— Operational context.

neInstanceId— InstanceNameId of the network element.

**Return Value**

A collection of InstanceNameIds of interfaces in which traffic storm control is disabled. In the returned list the network interface name association will be present and other associations will be cleared.

## getTrafficStormControlSettingInInterfaces

Returns the traffic storm control setting in the collection of interfaces. For interfaces in which broadcast suppression capability has been set to None, NULL value will be returned by this API.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed is null or it is not a valid interface InstanceNameId.
- If the interface does not exist in the database.

**Parameters**

opContext— Operational context.

interfaceInstanceIds— A collection of InstanceNameId of interfaces.

**Return Value**

A collection of TrafficStormControlSetting objects pertaining to the interfaces.

## getTrafficStormControlledInterfacesInNetworkElement

Returns all the traffic storm control enabled interfaces in the given network element. An interface is considered to be traffic storm control enabled, if storm control for one or more traffic types (unicast, broadcast or multicast) is enabled in it. If BroadcastSuppressionCapability is specified as None in the Portcapability object of an interface, those interfaces will not have traffic storm control configurations, though they are of type SwitchedNetworkInterface or RoutedNetworkInterface.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed neInstanceId is null or it is not a valid network element InstanceNameId.
- If the network element does not exist in the database.

**Parameters**

opContext— Operational context.

neInstanceId— InstanceNameId of the network element.

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**Return Value**

A collection of traffic storm control enabled NetworkInterface. The interfaces can be of type SwitchedNetworkInterface or RoutedNetworkInterface. In the returned list only the following associations will be present and other associations will be cleared.

- Traffic storm control association.
- Network interface name association.

## modifyStormControlInInterfaces

Modifies the traffic storm control setting in a given collection of interfaces. This API can also be used to enable or disable specify traffic control. When disabling all three(unicast, broadcast,multicast) traffic storm control , threshold should be 100. In the TrafficStormControlSetting objects passed, user shall not specify 100 % threshold and specify enable state for one of the traffic types. If BroadcastSuppressionCapability is specified as None in the Portcapability object of an interface, those interfaces will not have traffic storm control configurations, though they are of type SwitchedNetworkInterface or RoutedNetworkInterface.

ValidationException is thrown if any of the following situations occurs:

- If the argument passed trafficStormControlSettings is null or empty.
- If any of the element in the collection trafficStromControlSettings is not of type TrafficStormControlSetting.
- If any of the element in the collection trafficStormControlSettings does not exist in the database.
- If the attributes of any of the element in the collection trafficStromControlSettings is not valid.

Example:

- Bandwidth threshold is 100, when storm control for any one of the three traffic types(unicast,broadcast or multicast) is enabled.
- Bandwidth threshold is not 100, when storm control for all three traffic types is disabled.

PropertiesException is thrown if the bandwidth threshold is not in the range 0—100.

**Parameters**

opContext— Operational context.

trafficStormContolSettings— Collection of modified traffic storm control setting objects.

**Return Value**

void

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