External Call Transfer Restrictions

External Call Transfer Restrictions Overview

External Call Transfer Restrictions is a feature that you can use to configure gateways, trunks, and route patterns as OnNet (internal) or OffNet (external) devices at the system level. By setting the devices as OffNet, you can restrict the transferring of an external call to an external device and thus help prevent toll fraud.

If you try to transfer a call on an OffNet gateway or trunk when the service parameter Block OffNet to OffNet Transfer is set to True, a message displays on the user phone to indicate that the call cannot be transferred.

This chapter uses the following terms:

Term	Description
OnNet Device	A device that is configured as OnNet and considered to be internal to the network.
OffNet Device	A device that is considered as OffNet and, when routed, is considered to be external to the network.
Network Location	The location of the device, which is considered as OnNet or OffNet, with respect to the network.
Originating End	The device that gets transferred. The system considers this device as OnNet or OffNet.
Terminating End	The device that receives the transferred call. The system considers this device as OnNet or OffNet.
Incoming Call	A call for which only gateways and trunks call classification settings get used to classify it as OnNet or OffNet. Route Pattern call classification settings do not apply.

Term	Description
Outgoing Call	A call for which the call classification setting of the trunk, gateway, and route pattern gets considered. The Allow Device Override setting on the route pattern determines whether the trunk or gateway call classification setting gets used instead of the route pattern call classification setting.

Configure External Call Transfer Restrictions Task Flow

Procedure

	Command or Action	Purpose
Step 1	Configure the Service Parameter for Call Transfer Restrictions, on page 2	Block external calls from being transferred to another external device or number.
Step 2	To configure incoming calls perform the following procedures: • Configure the Clusterwide Service Parameter, on page 3 • Configure Gateways for Call Transfer Restrictions, on page 4 • Configure Trunks for Call Transfer Restrictions, on page 4	Configure gateways and trunks as OnNet (internal) or OffNet (external) by using Gateway Configuration or Trunk Configuration or by setting a clusterwide service parameter.
Step 3	Configure Outgoing Calls, on page 5	Configure transfer capabilities with route pattern configuration.

Configure the Service Parameter for Call Transfer Restrictions

To block external calls from being transferred to another external device or number:

Procedure

Step 1   From the Cisco Unified CM Administration user interface choose **System** > **Service Parameters**.

Step 2   On the Service Parameter Configuration window choose the Cisco Unified CM server you want to configure from the Server drop-down list.

Step 3   Choose **Cisco CallManager (Active)** from the Service drop-down list.

Step 4   Choose **True** from the Block OffNet to OffNet Transfer drop-down list. The default value specifies False.

Step 5   Click **Save**.

Configure Incoming Calls Task Flow

Procedure

	Command or Action	Purpose
Step 1	(Optional) Configure the Clusterwide Service Parameter, on page 3	Configure all gateways or trunks in the Cisco Unified Communications Manager cluster to be OffNet (external) or OnNet (internal).
Step 2	Configure Gateways for Call Transfer Restrictions, on page 4	Configure gateways as OnNet (internal) or OffNet (external) by using Gateway Configuration. When the feature is used in conjunction with the clusterwide service parameter Block OffNet to OffNet Transfer, the configuration determines whether calls can transfer over a gateway. You can configure the following devices as internal and external to Cisco Unified Communications Manager: • H.323 gateway • MGCP FXO trunk • MGCP T1/E1 trunk
Step 3	Configure Trunks for Call Transfer Restrictions, on page 4	Configure trunks as OnNet (internal) or OffNet (external) by using Trunk Configuration. When the feature is used in conjunction with the clusterwide service parameter Block OffNet to OffNet Transfer, the configuration determines whether calls can transfer over a trunk. You can configure the following devices as internal and external to Cisco Unified Communications Manager: • Intercluster trunk • SIP trunk

Configure the Clusterwide Service Parameter

To configure all gateways or trunks in the Cisco Unified Communications Manager cluster to be OffNet (external) or OnNet (internal), perform the following steps:

Before you begin

Configure the Service Parameter for Call Transfer Restrictions, on page 2

Procedure

Step 1	From the Cisco Unified CM Administration user interface choose **System** > **Service Parameters**.
Step 2	On the Service Parameter Configuration window choose the Cisco Unified CM server you want to configure from the Server drop-down list.
Step 3	Choose **Cisco CallManager (Active)** from the Service drop-down list.
Step 4	Choose either OffNet or OnNet (the default specifies OffNet) from the Call Classification drop-down list.

Configure Gateways for Call Transfer Restrictions

To configure the gateway as OffNet, OnNet, or Use System Default, perform the following procedure. The system considers calls that come to the network through that gateway as OffNet or OnNet, respectively.

Before you begin

Procedure

Step 1	From Cisco Unified CM Administration, choose **Device** > **Gateway**.
	The Find and List Gateways window displays.
Step 2	To list the configured gateways, click **Find**.
	The gateways that are configured in Unified Communications Manager display.
Step 3	Choose the gateway that you want to configure as OffNet or OnNet.
Step 4	In the Call Classification field choose OffNet or OnNet. If you have enabled clusterwide restrictions an all gateways, configure each gateway to Use System Default (this reads the setting in the Call Classification service parameter and uses that setting for the gateway).
Step 5	Click **Save**.

Configure Trunks for Call Transfer Restrictions

To configure the trunk as OffNet, OnNet, or Use System Default, perform the following procedure. The system considers calls that come to the network through that trunk as OffNet or OnNet, respectively.

Before you begin

Procedure

Step 1	From Cisco Unified CM Administration, choose **Device** > **Trunk.**

The Find and List Trunk window displays.

Step 2 To list the configured trunks, click **Find.**

The trunks that are configured in Unified Communications Manager display.

Step 3 Choose the trunk that you want to configure as OffNet or OnNet.

Step 4 From the Call Classification drop-down list, choose one of the following fields:

- **OffNet -** When you choose this field, this identifies the gateway as an external gateway. When a call comes in from a gateway that is configured as OffNet, the system sends the outside ring to the destination device.

- **OnNet -** When you choose this field, this identifies the gateway as an internal gateway. When a call comes in from a gateway that is configured as OnNet, the system sends the inside ring to the destination device.

- **Use System Default -** When you choose this field, this uses the Unified Communications Manager clusterwide service parameter Call Classification.

Note If you have enabled clusterwide restrictions an all trunks, configure each trunk to Use System Default (this reads the setting in the Call Classification service parameter and uses that setting for the trunk)

Step 5 Click **Save.**

Configure Outgoing Calls

To classify a call as OnNet or OffNet, administrators can set the **Call Classification** field to OnNet or OffNet, respectively, on the **Route Pattern Configuration** window. Administrators can override the route pattern setting and use the trunk or gateway setting by checking the **Allow Device Override** check box on the **Route Pattern Configuration** window.

Before you begin

Procedure

Step 1 From Cisco Unified CM Administration, choose **Call Routing** > **Route/Hunt** > **Route Pattern** and click **Find** to list all route patterns.

Step 2 Choose the route pattern you want to configure, or click **Add New**.

Step 3 In the **Route Pattern Configuration** window, use the following fields to configure transfer capabilities with route pattern configuration:

a) **Call Classification**—Use this drop-down list to classify the call that uses this route Pattern as OffNet or OnNet.

b) **Provide Outside Dial Tone**—If Call Classification is set to OffNet, this check box gets checked.

c) **Allow Device Override**—When this check box is checked, the system uses the Call Classification setting of the trunk or gateway that is associated with the route pattern instead of the Call Classification setting on the Route Pattern Configuration window.

Step 4   Click **Save**.

External Call Transfer Restrictions Interactions

Feature	Interaction
Drop Conference	The Drop Conference feature determines whether an existing ad hoc conference should be dropped by checking whether the conference parties are configured as OffNet or OnNet. You use the service parameter Drop Ad Hoc Conference and choose the option When No OnNet Parties Remain in the Conference to configure the feature. You determine OnNet status for each party by checking the device or route pattern that the party is using. For more information, see topics related to Ad Hoc Conference linking in the "Ad Hoc Conferencing" chapter.
Bulk Administration	Bulk Administration inserts gateway configuration (OffNet or OnNet) on the Gateway Template. For more information, see the *Cisco Unified Communications Manager Bulk Administration Guide*.
Dialed Number Analyzer (DNA)	When used to perform digit analysis on a gateway, DNA displays the Call Classification that is configured for the gateway and the route pattern. For more information, see the *Cisco Unified Communications Manager Dialed Number Analyzer Guide*.

External Call Transfer Restrictions Restrictions

Restriction	Description
FXS Gateways	FXS gateways such as Cisco Catalyst 6000 24 Port do not have a Call Classification field on the Gateway Configuration window; therefore, the system always considers them as OnNet.
Cisco VG248 Gateway	The system does not support the Cisco VG248 Gateway which does not have a Call Classification field.
FXS Ports	Cisco Unified Communications Manager considers all Cisco Unified IP Phones and FXS ports as OnNet (internal) that cannot be configured as OffNet (external).