

# Technotes: How to block Incoming calls in CUCM 8.x based on ANI with MGCP gateway

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- [Introduction](#) on page 1
- [Problem Description](#) on page 1
- [Solution](#) on page 2
- [Related Information](#) on page 6

## Introduction

*This document covers the Technotes for Blocking calls in Cisco Unified Communications Manager (CUCM) 8.x and later based on Automatic Number Identification(ANI) when CUCM is using MGCP Gateway.*

- ANI (Automatic number identification) is a feature of telephony intelligent network services which permits subscribers to display or capture the telephone numbers of calling parties.
- DNIS (Dialed Number Identification Service) is a telephone service that identifies for the receiver of a call the number that the caller dialed. It's a common feature of 800 and 900 lines. If you have multiple 800 or 900 numbers to the same destination, DNIS tells which number was called.

## Problem Description

When CUCMs are using MGCP gateways instead of H.323 gateways blocking calls based on ANI or Calling Number becomes difficult or not possible in older Cisco Unified Communications Manager (CUCM) versions which is below 8.x

From CUCM 8.x and later versions this task can be accomplished by using **“Route Next Hop By Calling Party”**

**Note:**

- If an MGCP gateway is used, from CUCM 8.x and later versions incoming calls can be blocked based on ANI or Calling Number. In the Older version of CUCM which is below 8.x, the only way to block unwanted calls is based on the DNIS information.

## Solution

**Block calls based on ANI in CUCM 8.x when CUCM is using MGCP gateway**

MGCP GW -> inbound calling **CSS called “Screen\_all-incoming\_calls\_ANI\_CSS”** -> match to **Translation pattern ! which has**

**“Route Next Hop By Calling Party” checked** which changes the behavior to route the calls based on Calling number not the called number to next Calling search space called -> **“block\_certain\_ANI-calls\_CSS”** -> which matches following translation patterns shown as an example,

The **CSS “block\_certain\_ANI-calls\_CSS”** should see following translations:

1) ! translation pattern with a CSS contains **“All Phones partition”** - This allows calls to route normally into the cluster.

2) 8001201 Blocking Pattern - Block calls coming from caller ID 8001201

3) 8601202 Blocking Pattern - Block calls coming from caller ID 8601202



### Translation Pattern Configuration

Save

#### Status

Status: Ready

#### Pattern Definition

Translation Pattern	<input type="text" value="!"/>
Partition	< None > ▾
Description	<input type="text" value="incoming call blocking"/>
Numbering Plan	< None > ▾
Route Filter	< None > ▾
MLPP Precedence*	Default ▾
Resource Priority Namespace Network Domain	< None > ▾
Route Class*	Default ▾
Calling Search Space	< None > ▾
External Call Control Profile	< None > ▾
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input type="text" value="No Error"/> ▾
<input checked="" type="checkbox"/> Provide Outside Dial Tone	
<input checked="" type="checkbox"/> Urgent Priority	
<input checked="" type="checkbox"/> Route Next Hop By Calling Party Number	

#### Calling Party Transformations

<input type="checkbox"/> Use Calling Party's External Phone Number Mask	
Calling Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
Calling Line ID Presentation*	Default ▾
Calling Name Presentation*	Default ▾
Calling Party Number Type*	Cisco CallManager ▾
Calling Party Numbering Plan*	Cisco CallManager ▾

#### Connected Party Transformations

Connected Line ID Presentation*	Default ▾
Connected Name Presentation*	Default ▾

#### Called Party Transformations

Discard Digits	< None > ▾
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
Called Party Number Type*	Cisco CallManager ▾

## Additional Information

### Block calls based on ANI and DNIS when CUCM is using H.323 gateway

If an H.323 gateway is used, incoming calls can be blocked based on either Automatic Number Identifier (ANI) or Dialed Number Identification Service (DNIS) information, or both, through translation rules on the gateway (GW) configuration.

For an example of how to block calls based on specific calling numbers (ANI), refer to the [Call Blocking Specific Calling Numbers](#)

For an example of how to block calls based on specific called numbers (DNIS), refer to the [Call Blocking Specific Called Numbers](#)

### Block calls based on DNIS when CUCM is using MGCP gateway

If MGCP gateway is used with the Older version of CUCM which is below 8.x the only way to block unwanted calls is based on the DNIS information. This is accomplished through translation patterns in the Cisco CallManager configuration.

An Translation pattern in CUCM must be created to match the inbound DNIS information (called party number). Then, the gateway in Cisco CallManager must be configured to have a Content Services Switch (CSS) with access to this Translation pattern first, based on the Translation pattern partition. Give the Translation pattern a CSS that has access to NOTHING. This sends the call nowhere, and the calling party receives a reorder tone.

**Note:** This method of blocking calls can only be accomplished based on the DNIS information (called party number) and not on the ANI (calling party number) information.

To block calls in the same manner at the Cisco CallManager level, use translation patterns. To do this, the DNIS or called number can be specified in a route pattern, then applied to the gateway. In this case, the "\*\*\*\*\*" that is used to block the call is the Route or Block this pattern option.

**Note:** This can only block unwanted calls based on DNIS information and not on the ANI information.

## Related Information

- [Number Translation using Voice Translation Profile](#)
- [How to block calls based on ANI and DNIS with Cisco H.323 Gateway](#)