

# **Gear up your PBX**

## **Cut Costs, Boost Profits**

Version 20160226

# **Advanced Inbound Routing**



# Goal of this Module

- Inbound Routing based on Caller ID (CID)
- Inbound CID Re-Formatting

# Concept: CID Inbound Routing

- Like DID → but Routes based on the **Calling** Number
- Different Destinations based on
  - Time of Day
  - Holiday
- Can add same CID Rule multiple times for different Trunks

# Adding a CID Inbound Rule

- Management Console → Inbound Rules → **Add CID Rule**
- Set Name for CID Rule (Optional)  
(Prepended on Incoming Calls)
- Set Caller ID mask
  - Can use the **\* wildcard**  
(e.g. 0044\* or 0044203\*)
  - Used to “catch” numbers from  
a certain group (country, area, etc)
- Point to Destination

The screenshot shows the 'Add Inbound Rule' configuration window. At the top, there are buttons for 'OK', 'Cancel', and 'Help'. The form is divided into sections: 'General' with fields for 'Name' (containing 'Inbound from UK') and 'Caller ID' (containing '0044\*'); 'Choose a SIP Trunk to link to this Inbound rule' with a dropdown menu; 'Routing of calls to Main Number' with two sections for 'Destination for calls during office hours' and 'Destination for calls outside office hours', each with an 'Extension' dropdown and a '800' dropdown; and two checkboxes at the bottom: 'Set up Specific Office Hours for this trunk' and 'Play holiday prompt when it's a global holiday'.

# Inbound Rule Order

- On Incoming Call
  - Per Trunk
  - Inbound Rules **top to bottom**
  - **First match** is used
- Example
  - Incoming Call from 0044 2033272020 to 0049 8922061592
- Scenario 1
  - DID \*1592 ← **uses this**
  - DID \*9035
  - CID 0044\*
- Scenario 2
  - CID 0044\* ← **uses this**
  - DID \*1592
  - DID \*9035

# Concept: Inbound CID Re-Formatting

- Changes the format of the Caller ID number
  - Based on **3CX-specific** Regular Expressions
  - Identifies **Source Pattern**
  - Replaces/Reformats based on **Replace Pattern**
  - Does **not** Reformat Caller ID Name

More Information: <http://www.3cx.com/blog/docs/cid-formatting/>

# Inbound CID Re-Formatting - When?

- The Provider sends the Caller ID in an inconvenient format
  - Most Common use
    - Provider sends an un-dialable number → redial fails
- Example (UK)
  - Provider sends Caller ID: 442033272020
  - Extension misses call and presses redial
  - Call Fails → Invalid Number
- Solution
  - Any number starting with “44”, prepend “00”, then route call

# Creating Inbound CID Re-Formatting Rules

- Management Console → SIP Trunks → Edit Trunk → **Caller ID** tab
- **Inbound** section → **Add**

The screenshot shows the 'Caller ID' tab of the SIP Trunk configuration. The 'Inbound' section is active, and the '+ Add' button is highlighted with a red box. Below the button are labels for 'Source Pattern' and 'Replace Pattern'.

General   DIDs   **Caller ID**   Options   Inbound Parameters

Outbound Parameters

Reformat Incoming or Outgoing Caller Identification numbers by configuring matching patterns. [For more information click here](#)

**Default caller ID**

Configure Outbound Caller ID

**Inbound**

**+ Add**   **X Delete**   **Move Up**   **Move Down**

Source Pattern   Replace Pattern

The 'Edit formatting' dialog box is shown. It has two input fields: 'Source Pattern' with the value '44(\*)' and 'Replace Pattern' with the value '0044\1'. At the bottom are 'OK' and 'Cancel' buttons.

**Edit formatting** ✕

Source Pattern

Replace Pattern



# Source Pattern

- . → One Digit
- .. → Two Digits
- .\* → All the Rest Digits (can only be used at the end)
- 0-9,+ → Fix Digits
- () → Save content of () as Variable
- Sample: 44(.\*)  
→ All Numbers starting with 44

# Replace Pattern


- 0-9,+ → Digit to write
- \[1-9] → Return the value from a () ← Variable
- Sample Number 442033272020
  - Source Pattern: 44(.\*)
  - Replace Pattern: 44\1 -> 442033272020
  - Source Pattern: (44)(.\*)
  - Replace Pattern: +44\2 -> +442033272020
  - Source Pattern: (44)2033(.\*)
  - Replace Pattern: +44\2 -> +44272020

# Test Your Knowledge

- Format 44 Numbers into International Format
  - From: 44 203 3272020
  - To: 0044 203 3272020
    - Source Pattern: ?
    - Replace Pattern: ?
- Convert International Format to Local
  - From: 0044 203 3272020
  - To: 3272020
    - Source Pattern: ?
    - Replace Pattern: ?

# Test Your Knowledge

- Format 44 Numbers into International Format
  - From: 44 203 3272020
  - To: 0044 203 3272020
    - Source Pattern: 44(.\*)
    - Replace Pattern: 0044\1
- Convert International Format to Local
  - From: 0044 203 3272020
  - To: 3272020
    - Source Pattern: (0044) (203) (.\*)
    - Replace Pattern: \3



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**[www.3CX.com/3CXAcademy](http://www.3CX.com/3CXAcademy)**

