

Why the Reuse of a Deleted DN May Cause Misrouted Calls in CallManager 4.x

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Introduction

With the release of Cisco CallManager 4.0(1), a new feature was introduced whereby when a phone or Directory Number (DN) is removed and the DN remains in the CallManager database as an unassigned DN. The deleted DN remains in the system until it is deleted from the Unassigned Directory Number option in the Route Plan Report.

This feature can help in the interim when you migrate or change some of your dial plan without having to advertise the new number. This is done when you forward any calls destined for the old number to the new number with the use of the Unassigned Directory Number option in the Route Plan Report.

If this feature is not used carefully, it can cause calls to be forwarded to the wrong destination if the administrator decides to reuse the old DN in a new or existing phone configuration. This issue is discussed in this document.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on Cisco CallManager 4.0(1)sr2 and affects CallManager release 4.0(1) and later.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Deletion and Reuse of a DN

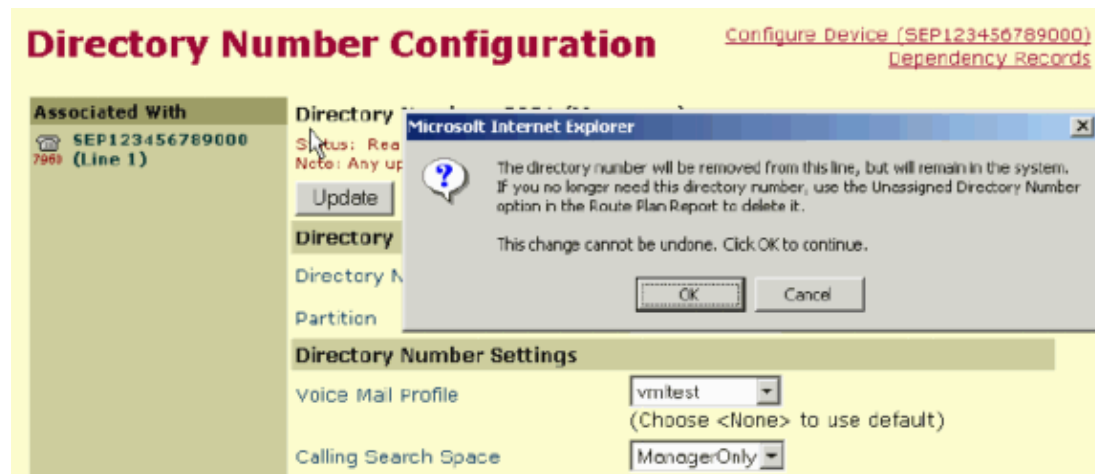
The procedure described in this section demonstrates what happens when the administrator deletes a DN and decides to reuse it afterward. In order to demonstrate the issue with misrouted calls, the active redirect has been configured (forward) in place of the old DN:

1. Delete DN 2801 from phone 1.
2. Create a new DN 3801 on phone 1.
3. Forward all calls destined to the old DN 2801 to the new DN 3801.
4. Create a new phone and reuse DN 2801 (potential problem).

Note: An update to the DN has the same effect as the deletion and creation of a new DN. For the purpose of this demonstration, a new DN has been deleted and created. Also note that the same partition for the DNs in question is used, which is when the problem of calls being misrouted arises.

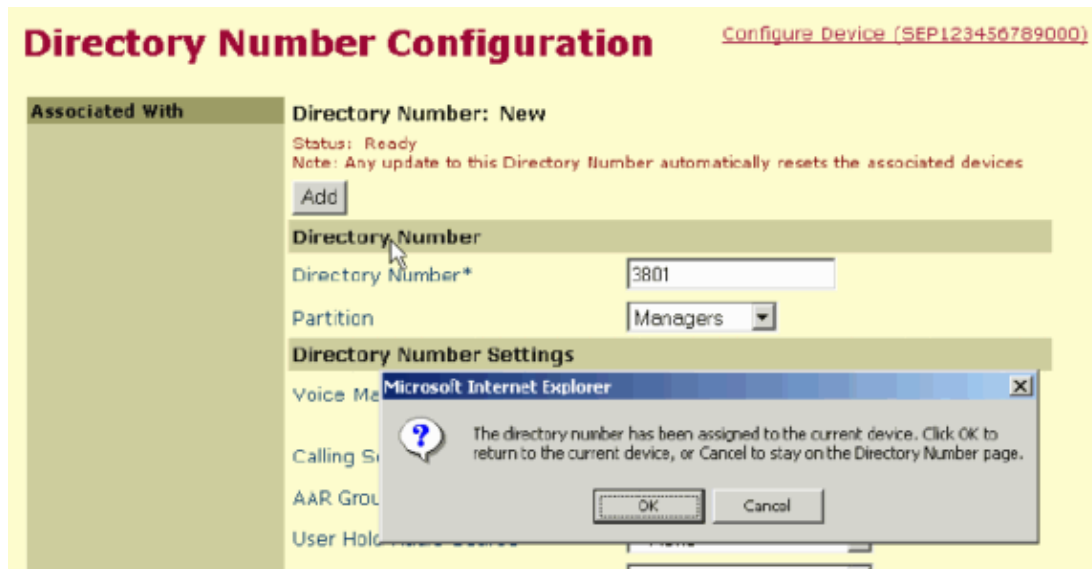
Step 1: Delete DN 2801 from Phone 1

In this image, DN 2801 has been deleted from phone 1. Note the warning message that indicates that the DN remains in the system.



Step 2: Create a New DN (3801) on Phone 1

This image shows the creation of the new DN 3801, which replaces 2801 in the same partition, Managers.



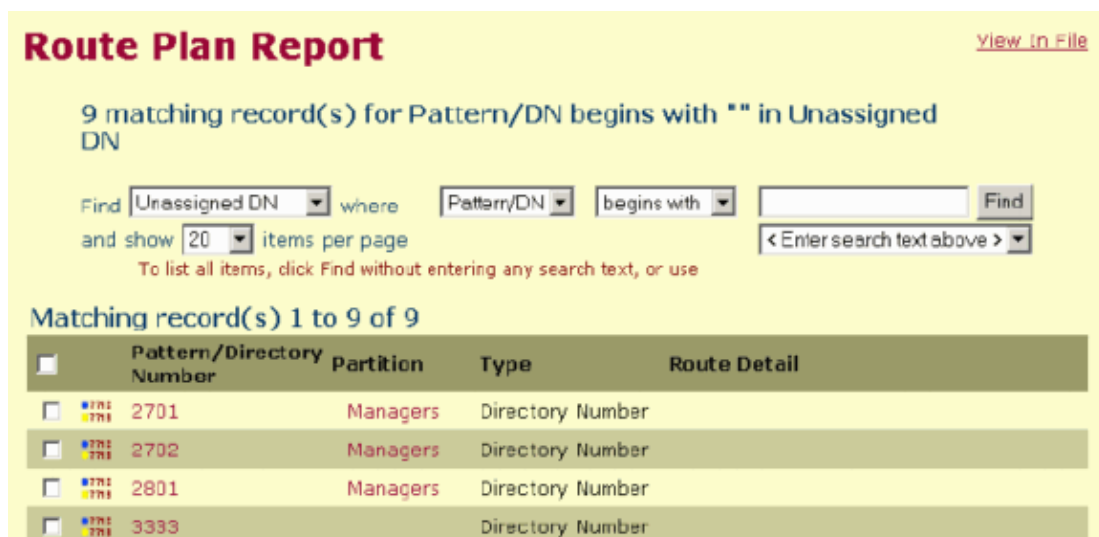
Step 3: Forward All Calls Destined for the Old DN (2801) to the New DN (3801)

Complete these steps in order to forward calls destined for the old DN to the New DN:

1. Click **Route Plan** and then **Route Plan Report** in order to view the deleted DN.



2. Select **Unassigned DN** from the Find drop-down menu in order to locate DN 2801.



3. Click on **DN 2801** in order to view the details.

Directory Number Configuration

[Dependency Records](#)

Associated With	Directory Number: 2801 (Managers) Status: Ready Note: Any update to this Directory Number automatically resets the associated devices <input type="button" value="Update"/> <input type="button" value="Delete"/>	
Directory Number		
Directory Number*	2801	
Partition	Managers	
<input checked="" type="checkbox"/> Active		
Directory Number Settings		
Voice Mail Profile	vmtest (Choose <None> to use default)	
Calling Search Space	ManagerOnly	
AAR Group	<None >	
Call Forward and Pickup Settings		
	Voice Mail Destination	Calling Search Space
Forward All	<input checked="" type="checkbox"/> 3801	<None >
Forward Busy	<input type="checkbox"/>	<None >
Forward No Answer	<input type="checkbox"/>	<None >
No Answer Ring Duration		(seconds)

Note: In the Directory Number Configuration window, the **Active** and **Forward All to 3801** checkboxes are selected. This is typically used as a temporary measure when a DN is updated and calls to the old DN need to be retained for a grace period until the new DN is announced.

Step 4: Create a New Phone and Reuse DN 2801 (Potential Problem)

Assume that phone 2 has already been added and it has been decided to reuse the old DN.

Directory Number Configuration

[Configure Device \(SEP098765432111\)](#)

Associated With	Directory Number: New Status: Ready Note: Any update to this Directory Number automatically resets the associated devices <input type="button" value="Add"/>	
Directory Number		
Directory Number*	2801	
Partition	Managers	
Directory Number Settings		
Voice Mail Profile	vmtest (Choose <None> to use default)	
Calling Search Space	ManagerOnly	
AAR Group	<None >	
User Hold Audio Source	<None >	
Network Hold Audio Source	<None >	
Auto Answer	Auto Answer Off	
Call Forward and Pickup Settings		
	Voice Mail Destination	Calling Search Space
Forward All	<input checked="" type="checkbox"/> 3801	<None >
Forward Busy	<input type="checkbox"/>	<None >

Note: As seen in the new Directory Number Configuration window, 2801 was entered as a DN followed by the Managers partition. As soon as the partition is entered, the rest of the fields get populated automatically (reimported) with the same values as per the deleted unassigned DN, 2801 in Step 3.

Notice also that the Forward All checkbox is still checked with a destination of 3801 DN. If this is left checked, it causes all calls destined for phone 2 to be forwarded to phone 1. The reimport of the old DN configured values occurs regardless of whether the old DN was active or not (whether the Active checkbox is checked or not).

Related Information

- [Voice Technology Support](#)
- [Voice and Unified Communications Product Support](#)
- [Recommended Reading: Troubleshooting Cisco IP Telephony](#)
- [Technical Support & Documentation – Cisco Systems](#)

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