

Lync 2013 Call Forwarding Integration to an ITSP

This document outlines the steps required to ensure that calls forwarded from Lync 2013 to the ITSP contain a phone number that the ITSP will accept.

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Devices Affected

Models	Versions
SBC 1000/2000	3.0.2v242 and higher



This article is only applicable to Lync 2013. It is not applicable to Lync 2010 installations.

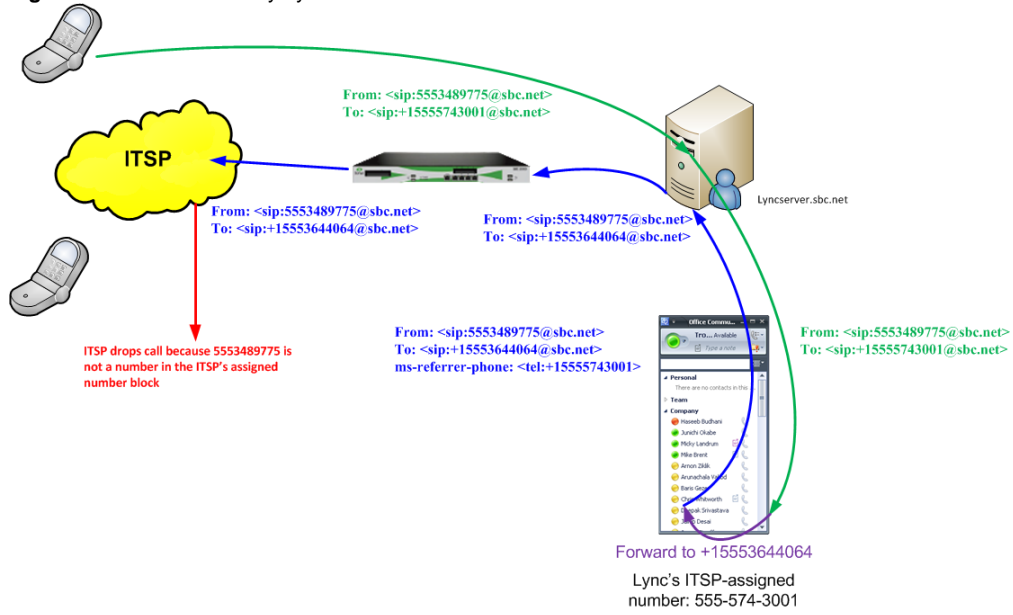
The Original Problem

As some SIP Trunk providers require that calls originate from the number range the ITSP has assigned to the customer, it is necessary to ensure that all calls from SBC to the ITSP have a FROM, DIVERSION or P-Asserted-Identity (PAI) number which is from the ITSP-assigned range. For instance, if the carrier has assigned a customer 574-1000 to 574-9999, the calling number, diversion, or PAI for any SBC --> ITSP call must fall within that range.

However, calls that are forwarded by Lync 2013 back to the SIP Trunk contain the calling number (FROM header) of the original calling number rather than the Lync 2013 number. In this case, the ITSP refuses to route the call because the calling number is that of the original caller, not an ITSP-assigned number.

The following call flow diagram depicts the scenario where the call forwarded by Lync 2013 does not have History-Info

Figure 1: Call Forwarded by Lync 2013



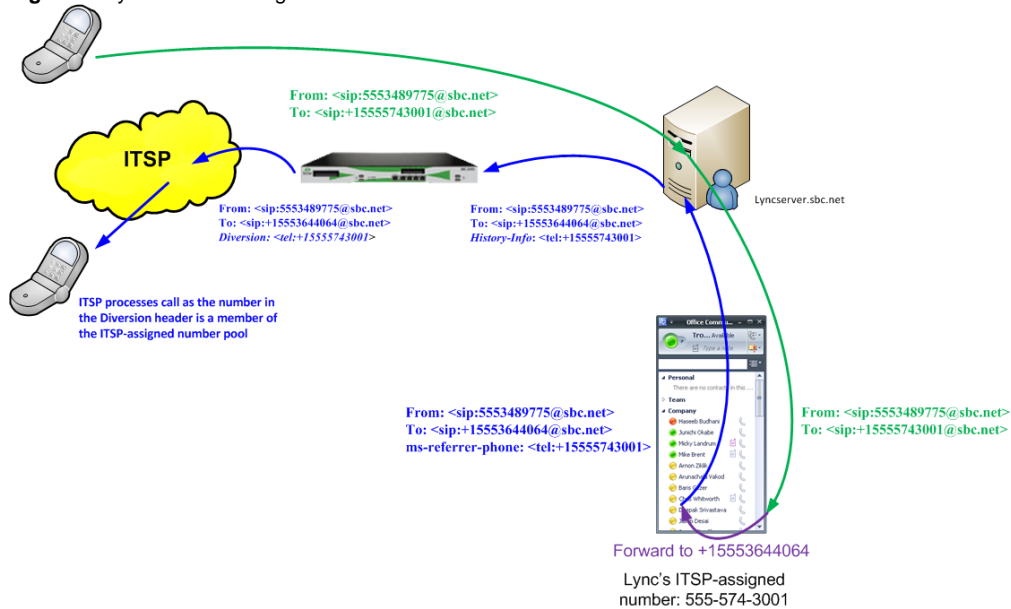
Configuration Details

Configuration Overview

Configure Lync 2013 Server to supply History-Info on forwarded calls, then use the SBC to convert the number in the History-Info header to a SIP header the ITSP will accept for calling authorization.

The following call flow diagram shows a Lync Server configured to supply History-Info on forwarded calls:

Figure 2: Lync Server Configured

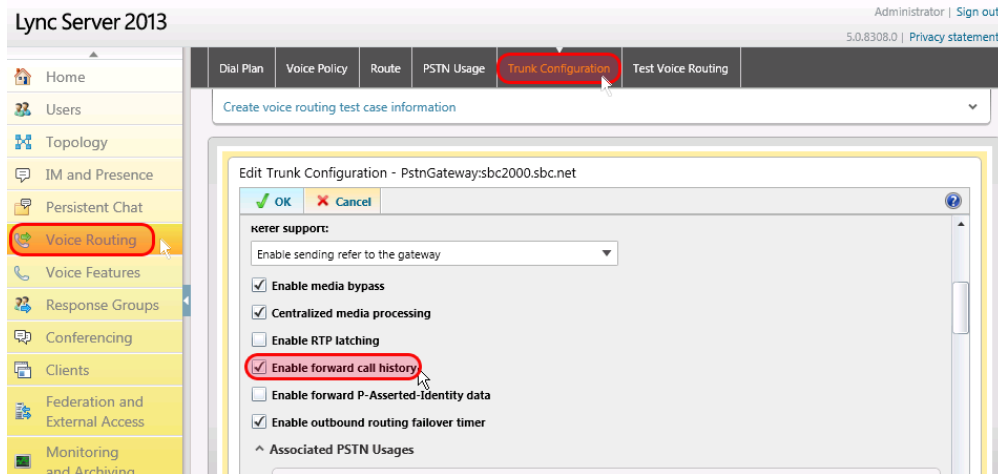


Lync 2013 Required Configuration

The Lync Server Trunk Configuration must be configured to supply History-Info on forwarded calls

To enable Lync Server to Send History-Info, navigate to "Voice Routing", "Trunk Configuration" and check the "Enable forward call history" option

Figure 3: Trunk Configuration



SBC 1000-2000 Configuration

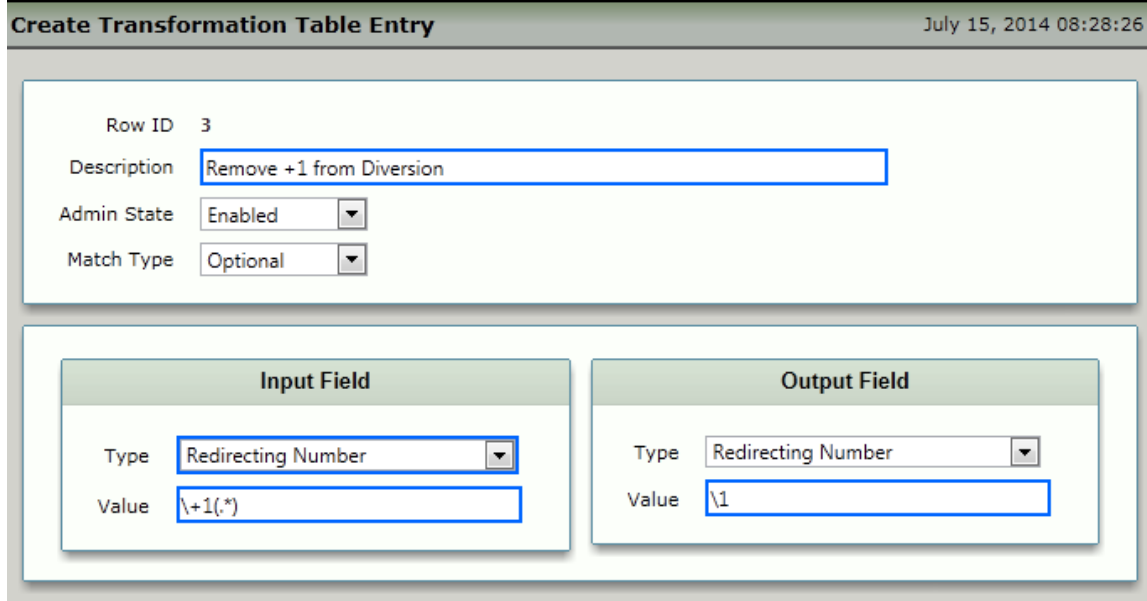
The SBC can be configured to supply Diversion, From, and/or PAI headers to the ITSP. Use the sections below to provide the desired header.

Diversion header

The SBC will automatically map Lync's History-Info header into a Diversion header when sending the call to the ITSP. No other configuration is required in order to send a Diversion Header to the ITSP.

Modifying the outgoing Diversion Header number is achieved by simply making an entry in the Transformation Table. The Transformation Entry below removes the +1 from the Diversion Header.

Figure 4: Modify Outgoing Diversion Header Number



From header

The incoming History-Info header is automatically mapped into the SBC's transformation table *Redirecting Number* IE. To send the History-Info number as the From (calling) number, add the entry below to the appropriate transformation table.

Set the *Calling Number* using History-Info:

Figure 5: Set Calling Number

Row ID 5

Description Set FROM using History-Info (Redirecting Number)

Admin State Enabled

Match Type Mandatory

Input Field	Output Field
Type Redirecting Number	Type Calling Address/Number
Value (*)	Value \1

P-Asserted-Identity (PAI) header

A SIP Message Manipulation (SMM) permits setting the PAI number using the History-Info number. Several steps are required:

1. In the transformation table, set *SG User Value 1* IE from the *Redirecting Number* IE.
2. Create a SMM Rule to insert *SG User Value 1* into the PAI header.
3. Add the SMM Rule to the ITSP Signaling Group.

i The SMM configuration below contains just the salient elements for creating the necessary SMM Rule. See [SIP Message Manipulation - Setting the P-Asserted Identity](#) for step-by-step instructions on creating a SMM Rule. Be sure to substitute the steps below as appropriate when building the SMM Rule.

Step 1: Transformation Table Configuration

- In the transformation table, set *SG User Value 1* IE from the *Redirecting Number* IE

Figure 6: Transformation Table Configuration

Row ID 2

Description Set SG User Val from Redirecting Number (referredBy/historyInfo)

Admin State Enabled

Match Type Mandatory

Input Field

Type Redirecting Number

Value (.*)

Output Field

Type SG User Value 1

Value \1

OK

Step 2: SIP Message Manipulation Configuration

- Create a SMM Rule to set the URI User (the PAI number) in the P-Asserted-Id header.

Figure 7: Create SMM Rule

Description Set PAI from SG User Value 1

Condition Expression Add/Edit

Admin State Enabled

Result Type Optional

Header Action Modify

Header Name P-Asserted-Identity

Header Ordinal Number 1st

▼ Header Value

Display Name Ignore

▼ URI

URI Scheme Ignore

▼ URI User Info

URI User Modify

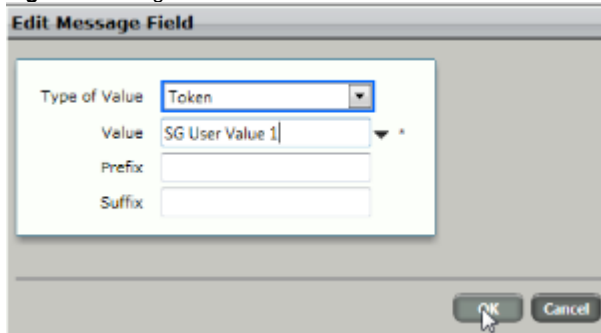
Password Ignore

URI User Parameters

Name	Value	Action
-- Table is empty --		

- Configure the Add/Edit to retrieve the number from SG User Value 1.

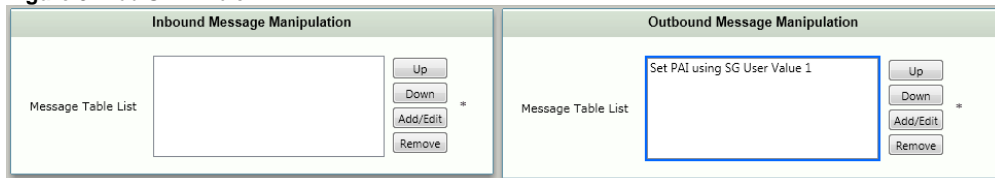
Figure 8: Configure Add/Edit




Step 3: Add the SMM Rule to the ITSP Signaling Group

- Add the newly created SMM Rule to the Outbound Message Manipulation section of the ITSP Signaling Group.

Figure 9: Add SMM Rule



Additional Information

 In testing, the Lync Server did not dynamically update its configuration when the *Enable Forward Call History* was changed. A combination of restarting the Lync Server Front-End and Mediation Server services was successful in enabling the Lync Server to include the History-Info header.

