
Configuring SBC Edge with ITSP that Requires Digest Authentication with 401 Unauthorized Challenge

This article describes the steps necessary to configure the SBC Edge with a SIP peer or with an Internet Telephony Service Provider (ITSP) that requires digest authentication with 401 Unauthorized challenge.

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Related Articles

- [Managing Remote Authorization Tables](#)
- [Creating and Modifying Entries to Remote Authorization Tables](#)
- [Creating and Modifying Entries in SIP Server Tables](#)

Prerequisites

General

This document assumes that you have already created a Signaling Group and a SIP Server table for the ITSP.

Software Version

Verify that your SBC Edge is loaded with the [correct boot image version](#) and that your [SBC Edge base software version](#) is at least version 2.0.0, build 108.

System Licenses

The SBC Edge system must have the necessary [licenses](#) to make calls.

Configuration Steps

The configuration is comprised of three overall steps:

- [Creating a Remote Authorization Table](#)
- [Assigning the Remote Authorization Table to the SIP Server Table](#)
- [Assigning the SIP Server Table to the Signaling Group for the ITSP](#)

1. [Add a Remote Authorization Table](#)

Figure 1: Add Remote Authorization Table

The screenshot shows a web browser window titled "Add Remote Authorization Table - Mozilla Firefox". The address bar shows the URL "https://172.16.250.244/cgi/phpUI/config.php?cfg=/views/voice/sipUserCredTable_details.xr". The page header includes the title "Add Remote Authorization Table" and the timestamp "April 19, 2012 19:45:52". The main content area contains a form with the following fields:

Row ID	2
Description	<input type="text" value="ITSP-1"/>

An "OK" button is located at the bottom right of the form.

2. Add a Remote Authorization entry

Figure 2: Add Remote Authorization Entry

The screenshot shows a web browser window titled "Add Remote Authorization Entry - Mozilla Firefox". The address bar shows the URL "https://172.16.250.244/cgi/phpUI/config.php?cfg=/vie". The page header includes the title "Add Remote Authorization Entry" and the timestamp "April 12, 2012 22:51:01". The main content area contains a form with the following fields:

Row ID	2
Realm	<input type="text" value="ITSPRealm"/>
User Name	<input type="text" value="d8Er27ScWlQ"/> *
Enter Password	<input type="password" value="....."/> *
Confirm Password	<input type="password" value="....."/> *

An "OK" button is located at the bottom center of the form.

3. Assign the Remote Authorization Table to the SIP Server Table

Figure 3: Assign Remote Authorization Table

ITSP-1 SIP Server Table

Total 1 SIP Server Row

Row ID	Host	Port	Protocol
1	10.0.0.10	5060	UDP

Server Host

Priority: 1

Host: 10.0.0.10 FQDN or IP *

Port: 5060 [1024..65535] *

Protocol: UDP *

Transport

Monitor: SIP Options

Keep Alive Frequency: 30 secs [30..300] *

Recover Frequency: 5 secs [5..300] *

Remote Authorization and Contacts

Remote Authorization Table: ITSP-1

Contact Registrant Table: None

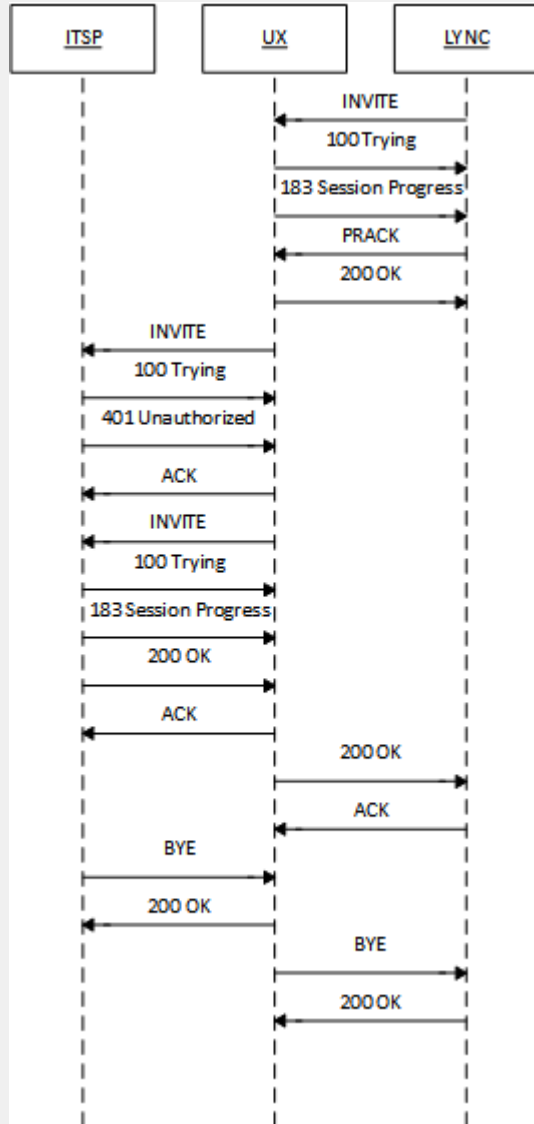
Additional Information

Call Flow

The call flow below depicts an outbound call from Lync to ITSP via Sonus SBC 1000/2000.

- After the initial INVITE from the Mediation server, SBC Edge (UA) sends an INVITE request to the ITSP proxy server (UAS).
- SBC Edge then receives 100 Trying and then 401 Unauthorized request from the ITSP proxy server.
- SBC Edge, acting as a UA, then re-sends the request and **authenticates itself** by including an **Authorization** header field with the request.
- The Authorization field value consists of credentials containing the authentication information of the UA for the realm of the resource being requested as well as parameters required in support of authentication and replay protection.
- The Realm, Username and Password information are taken from the Remote Authorization Table entry based on the username that is provided by the realm provided by the UAS.

Figure 4: Call Flow



Call Debugging Trace

The SBC Edge debug log produced at Trace level will show the information that is used to compute the MD5 string used in the Authorization header:

```
[2012-04-12 16:17:40,303] 5688 0001 com.net.ux.sip TRACE (Credentials.cpp:451) - computeResponse:  
creating credentials:  
algorithm : "MD5"  
userName  : "d8Er27ScWIQ"  
passWord  : "uw83i29BeY3x"  
realm     : "ITSPRealm"  
nonce     : "ITSPRealmDe98wSj8euJdU8SHs8"  
cNonce    : "baea32a3"  
nonceCount: "00000001"  
qop       : "auth"  
method    : "INVITE"  
uri       : "sip:15105742474@10.0.0.10:5070;user=phone"
```