

User Registration with SBCs

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Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Related Documentation

Document Name
Mediant 500 Gateway & E-SBC User's Manual
Mediant 500L Gateway & E-SBC User's Manual
Mediant 800 Gateway & E-SBC User's Manual
Mediant 1000B Gateway & E-SBC User's Manual
Mediant 2600 SBC User's Manual
Mediant 4000 SBC User's Manual
Mediant 9000 SBC User's Manual
Mediant Software SBC User's Manual
Gateway and SBC CLI Reference Guide
SIP Message Manipulation Reference Guide

General Notes, Warnings, and Safety Information



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Documentation Feedback

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1 Introduction

This document provides step-by-step instructions on how to configure user registration with AudioCodes Session Border Controllers (SBCs) (hereafter, referred to as *device*).

As the configuration method differs between software versions, this document is structured accordingly.

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2 Prerequisite

In order for SIP user agents (e.g., SIP phones or gateways) to register with your AudioCodes device, the device's installed License Key must include the "Far End Users (FEU)" license, which specifies the number of users that can register with the device. If it doesn't include this license, contact your AudioCodes sales representative to purchase a new License Key that includes the FEU license.

To check the number of licensed far-end users available on your device, open the License Key page (**Setup > Administration > License > License Key**):

Figure 2-1: Viewing FEU License

The screenshot displays the 'License Key' configuration page in the SBC Core Administration interface. The page is divided into several sections:

- License Key Summary:** Shows Product Key (ZE31A77B07F02UHQ), Local License Key, Serial Number (5753790), and Device Type (78).
- GENERAL:** Includes High Availability (HA) and DSP Channels (600).
- VOIP SIGNALING PROTOCOLS:** Includes SIP, MGCP, and MEGACO.
- SBC CAPACITY:** A table showing 'Far End Users (FEU)' with a Local value of 100 and an Actual value of 100. This row is highlighted with a red box.
- SKYPE FOR BUSINESS:** Includes MSFT and TEAMS.
- VOIP FEATURES:** Includes Voice Quality Monitoring, WebRTC, SIPRec Sessions, SIPRec Redundancy, RTP-JR, IPMedia Detector, and Media Enhancement.
- SECURITY FEATURES:** Includes IPsec, Media Encryption, Strong Encryption, and Encrypt Control Protocol.
- IP MEDIA FEATURES:** Includes VXML.
- CODERS:** Lists various codec configurations like G.723, NETCODER, AMR, G.729, G.722, GSM-EFR, etc.
- MANAGEMENT FEATURES:** Includes CU and EMS.

At the bottom of the page, there are buttons for 'Floating License', 'Load File', and a printer icon.

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3 Version 6.6

This section describes how to configure user registration without a password, with devices running Version 6.6.

3.1 User-Info File Format

The User-Info file defines the users that you want registered with the device. To create the file, use a text-based application such as Notepad. Once you have created the file with all the required users, upload it to the device as described in the next section.

The following shows an example of the format of the User Info file:

```
[SBC]
;FORMAT :
;LocalUser,UserName,Password,IPGroupID
ec2_hicham,ec2_hicham,hicham_pwd,4
ec2_Boris,ec2_Boris,Boris_pwd,4
boris,boris,boris_pwd,4
remi,remi,remi_pwd,4
etienne,etienne,etienne_pwd,4
ashref,ashref,ashref_pwd,4
```

The format of the User-Info file is as follows:

- **LocalUser:** Identifies the user and is used as the URI user part of the AOR in the device's user's registration database.
- **UserName:** Defines the user's authentication username.
- **Password:** Defines the user's authentication password (between double quotation marks).
- **IPGroupID:** IP Group ID to which the user belongs and is used as the URI source host part for the AOR in the database



Note: Make sure that you add a carriage return at the end of the last line (by pressing the **Enter** key).

3.2 Upload User-Info File

Once you have created the User-Info file (described in the previous section), upload it to the device:

- **CLI:**

```
login as: Admin
Welcome to AudioCodes CLI
Admin@192.168.100.12's password: xxxx
Last login: Wed Sep 12 2012 at 09:48:27
My SBC> enable
Password: xxxx
My SBC# copy user_info from <URL>
```

The protocol of the URL where the User-Info file is located can be HTTP, HTTPS, TFTP, or NFS.

Once copied, do a save to flash-memory (using the `write` command) so that the file is persistent on the device.

- **Web Interface:** Open the Load Auxiliary Files page, and then select the file under the **User Info file** group

3.3 Enable Usage of User-Info File

➤ **To use the User-Info file, configure the device as follows:**

1. Enable the usage of the User-Info file by configuring the device with the following *ini* file parameter setting:

```
[SIP Params]
ENABLEUSERINFOUSAGE = 1
```

2. Open the IP Group table, and then configure an IP Group for the users:
 - a. Select the **Common** tab, and then from the 'Type' drop-down list, select **User**:
 - b. Select the **SBC** tab, and then configure the following so that the device can challenge SIP REGISTER requests from the users:
 - ◆ 'Registration Mode' = **User initiates registrations**
 - ◆ 'Authentication Mode' = **SBC as Server**
 - ◆ 'Authentication Method List' = "register"
3. In the SRD that is associated with the IP Group of the users (above), from the 'Enable Un-Authenticated Registrations' drop-down list, select **No**.

3.4 Viewing Registered SBC Users

You can view the users that are registered with the device:

■ **CLI:**

```
login as: Admin

Welcome to AudioCodes CLI
Admin@192.168.100.12's password: ****
Last login: Wed Sep 12 2012 at 10:19:07

My SBC# show voip register sbc

*** SBC Registered Users ***

Address Of Record                                Contact
-----
ec2_1750@213.152.27.141                          UserInfo Contact; Active status: 0;
IPG#4 <sip:ec2_1750@62.251.238.226:19294;rinstance=d08d05dc217f84bf>; Active
status: 1; IPG#4
-----
ec2_1752@213.152.27.141                          UserInfo Contact; Active status: 0;
IPG#4 <sip:ec2_1752@62.251.238.226:24210;rinstance=3bef271d3427e0e4>; Active
status: 1; IPG#4
-----
2_IGIB3DQK@213.152.27.141                       UserInfo Contact; Active status: 0;
IPG#4
-----
```

- **Web Interface:** Open the SAS/SBC Registered Users page (**Status & Diagnostics > VoIP Status > SAS/SBC Registered Users**):

Figure 3-1: Viewing SBC Registered Users in Web Interface

Address Of Record	Contact
ec2_hicham@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2_Boris@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2_1744@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2_1745@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2_1746@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2_1747@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2_1748@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2_1749@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2_1750@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4 <sip:ec2_1750@62.251.238.226:19294;rinstance=d08d05dc217f84bf>; Active status: 1; IPG#4
ec2_1751@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4
ec2_1752@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4 <sip:ec2_1752@62.251.238.226:24210;rinstance=3bef271d3427e0e4>; Active status: 1; IPG#4
ec2_1753@213.152.27.141	UserInfo Contact; Active status: 0; IPG#4 <sip:ec2_1753@62.251.238.226:54248;rinstance=54b303202a920b9e>; Active status: 1; IPG#4

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4 Version 7.2 or Later

This section describes how to configure user registration with devices running software Version 7.2 or later.

4.1 User Registration without Authentication

This section describes how to configure user registration without authentication, with the device.

4.1.1 Create an IP Group for Users

Configuring an IP Group for users allows the device to take into consideration SIP REGISTER messages received from the users.

➤ **To create an IP Group for users:**

1. Open the IP Groups table (**Setup > Signaling & Media > Core Entities > IP Groups**).
2. Click **New**, and then configure an IP Group for the users (e.g., "IPP") with the following settings:
 - 'Type' = **User**
 - 'Registration Mode' = **User initiates registrations**
 - 'Authentication Mode' = **User Authenticates**

4.1.2 Create a Classification Rule

A Classification rule allows the device to authorize traffic from the users and classify this traffic as belonging to the IP Group you configured for the users (e.g., "IPP").

➤ **To create a Classification Rule:**

1. Open the Classification table (**Setup > Signaling & Media > SBC > Classification**).
2. Click **New**, and then configure a Classification rule for the "IPP" users with the following settings:
 - 'Action Type' = **Allow**
 - 'IP Group Selection' = **Source IP Group**
 - 'Source IP Group' = **#4 [IPP]** (IP Group for users - configured in [Create an IP Group for Users](#) Section)

4.1.3 Create an IP-to-IP Routing Rule for REGISTER Messages

You need to create a routing rule that allows the device to reply to received REGISTER messages from users with a SIP 200 OK response, without the need for a password.

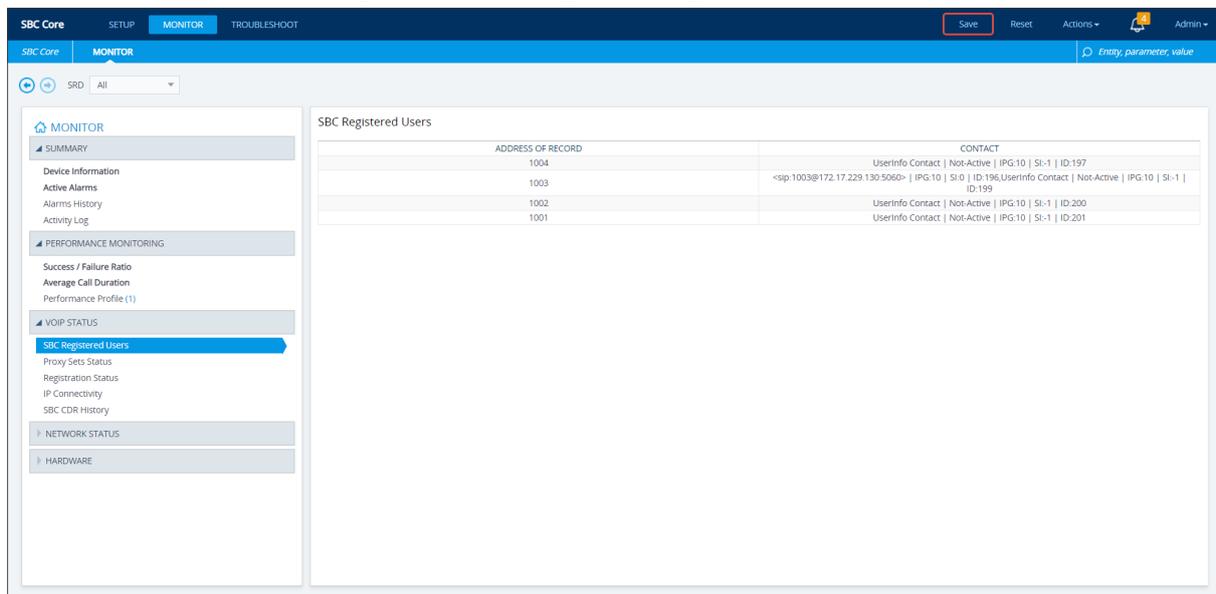
- **To create an IP-to-IP Routing Rule for REGISTER Messages:**
 1. Open the IP-to-IP Routing table (**Setup > Signaling & Media > SBC > Routing > IP-to-IP Routing**).
 2. Click **New**, and then create a rule with at least the following settings:
 - 'Request Type' = **REGISTER**
 - 'Destination Type' = **IP Group**
 - 'Destination IP Group' = **#4 [IPP]** (IP Group for users - configured in Create an IP Group for Users)

4.1.4 View User Registration Status

This section describes how to view the User Registration status.

- **To view the registration status of the users with the device:**
 1. Open the SBC Registered Users page (**Monitor > Monitor > VoIP Status > SBC Registered Users**):

Figure 4-1: Viewing User Registration Status



4.2 User Registration with Authentication

This section describes how to configure user registration with authentication, when AudioCodes SBC acts as Authentication Server.

For this functionality, the following is required:

- An IP Group for the users (e.g., "IPP"), where the device is acting as an Authentication Server for authenticating REGISTER messages from the users.
- A Classification rule to allow calls (and classify them to the IP Group) from the users.
- An up-to-date User Information table (user registration database) with usernames and passwords.
- An IP-to-IP Routing rule for routing incoming traffic to the users, based on the device's user registration database.



Note: If you want to accept any REGISTER message without password verification (i.e., 200 OK sent immediately), you must create a User-type IP Group with the 'Authentication Mode' parameter configured to **User Authenticates**, and an IP-to-IP Routing rule with the 'Request Type' parameter configured to **REGISTER** and 'Destination IP Group' configured to the users' IP Group.

4.2.1 Create an IP Group for Users

Configuring an IP Group for users allows the device to authenticate SIP REGISTER messages received from the users. The device uses the User Information table (user registration database – configured later in Enable and Configure User Information Table) to authenticate users.

➤ **To create an IP Group for users:**

1. Open the IP Groups table (**Setup > Signaling & Media > Core Entities > IP Groups**).
2. Click **New**, and then configure an IP Group for the users (e.g., "IPP") with the following settings:
 - 'Type' = **User**
 - 'Registration Mode' = **User initiates registrations**
 - 'Authentication Mode' = **SBC as Server**
 - 'Authentication Method List' = "register"
 - 'SBC Server Authentication Type' = **According to Global Parameter**

4.2.2 Create a Classification Rule

A Classification rule allows the device to authorize traffic from users and classify traffic from them as belonging to the IP Group you configured previously for the users (e.g., "IPP").

➤ **To create a Classification Rule:**

1. Open the Classification table (**Setup > Signaling & Media > SBC > Classification**).
2. Click **New**, and then configure a Classification rule for the "IPP" users with the following settings:
 - 'Action Type' = **Allow**
 - 'IP Group Selection' = **Source IP Group**
 - 'Source IP Group' = **IPP** (IP Group you configured for users in Create an IP Group for Users)

4.2.3 Enable and Configure User Information Table

The User Information defines the users registered with the device. For using the User Information table, you need to enable the feature. In addition, the device's License Key must include the FEU license.

➤ **To enable and configure the User Information Table:**

1. Open the Proxy & Registration page (**Setup > Signaling & Media > SIP Definitions > Proxy & Registration**).
2. From the 'User-Information Usage' drop-down list [EnableUserInfoUsage], select **Enable**.
3. Reset the device.
4. Open the User Information table (**Setup > Signaling & Media > SBC > User Information**).
5. Click **New**, and then configure the table (device's users registration database) with all the required users (username, password, and IP Group of the users configured in Create an IP Group for Users)

4.2.4 Create an IP-to-IP Routing Rule

You need to create a routing rule that routes calls to registered users configured in the User Information table (see Enable and Configure User Info).

➤ **To create an IP-to-IP Routing Rule:**

1. Open the IP-to-IP Routing table (**Setup > Signaling & Media > SBC > Routing > IP-to-IP Routing**).
2. Click **New**, and then create a rule with at least the following settings:
 - 'Destination Type' = **All Users** - device searches its user registration database (User Information table) for a user that matches the Request URI of the incoming SIP dialog and if found, forwards it to the user.

4.2.5 View User Registration Status

To view the registration status of the users with the device, open the SBC Registered Users page (**Monitor > Monitor > VoIP Status > SBC Registered Users**):

Figure 4-2: Viewing User Registration Status

The screenshot shows the SBC Core Monitor interface. The top navigation bar includes 'SBC Core', 'SETUP', 'MONITOR', and 'TROUBLESHOOT'. The 'MONITOR' tab is active. Below the navigation bar, there are buttons for 'Save', 'Reset', 'Actions', and 'Admin'. A search bar contains the text 'Entity, parameter, value'. The left sidebar menu is expanded to 'VOIP STATUS', with 'SBC Registered Users' selected. The main content area displays a table titled 'SBC Registered Users' with the following data:

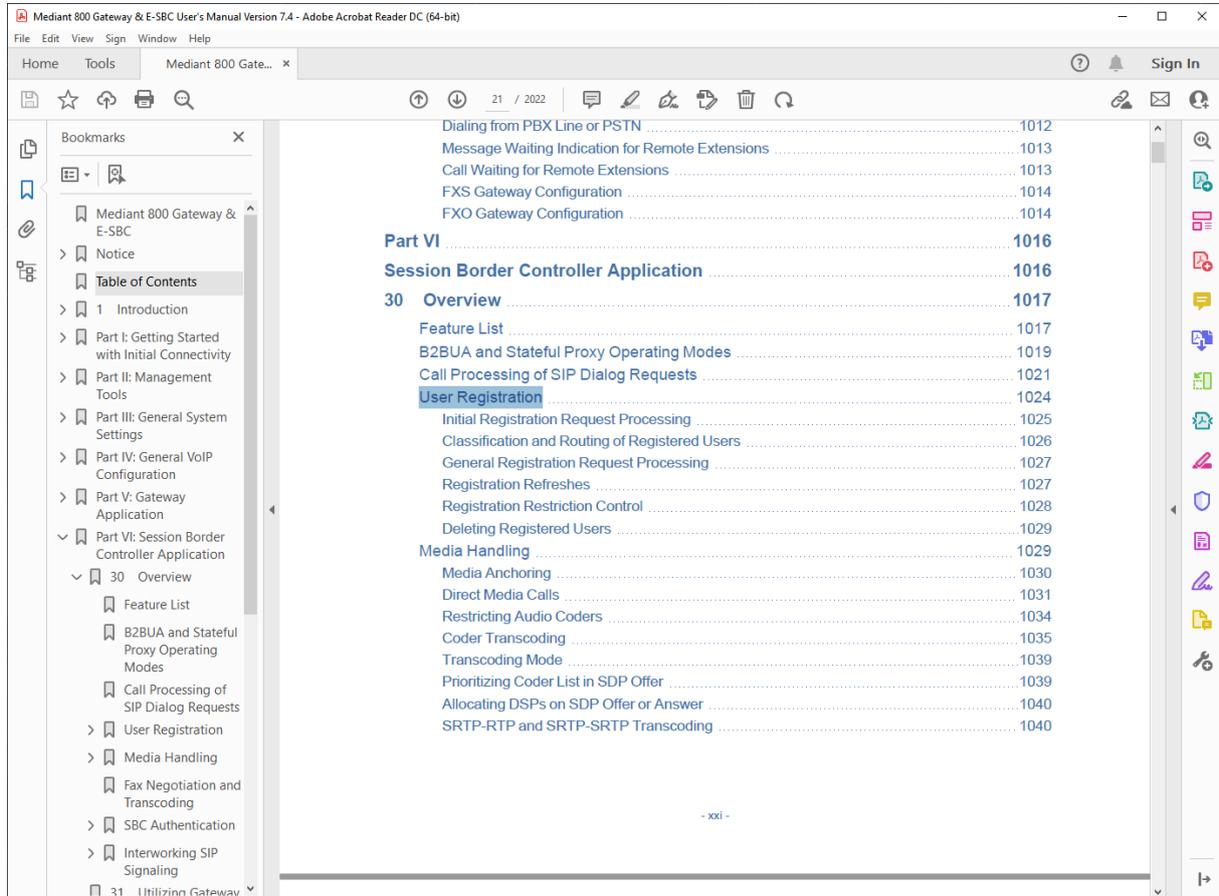
ADDRESS OF RECORD	CONTACT
1004	UserInfo Contact Not-Active IPG:10 SI-1 ID:197
1003	-sip:1003@172.17.229.130:5060> IPG:10 SI:0 ID:196,UserInfo Contact Not-Active IPG:10 SI-1 ID:199
1002	UserInfo Contact Not-Active IPG:10 SI-1 ID:200
1001	UserInfo Contact Not-Active IPG:10 SI-1 ID:201

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5 Documentation Chapter

The device's User's Manual discusses user registration methods in the chapter below:

Figure 5-1: User Registration Chapter



International Headquarters

1 Hayarden Street,
Airport City
Lod 7019900, Israel
Tel: +972-3-976-4000
Fax: +972-3-976-4040

AudioCodes Inc.

200 Cottontail Lane
Suite A101E
Somerset NJ 08873
Tel: +1-732-469-0880
Fax: +1-732-469-2298

Contact us: <https://www.audiocodes.com/corporate/offices-worldwide>

Website: <https://www.audiocodes.com/>

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