Table of Contents

1. Introduction ........................................................................................................................................ 2
2. Environment Setting ............................................................................................................................ 3
   2.1 Architecture Setup .............................................................................................................................. 3
   2.2 Device Preparation ............................................................................................................................. 3
3. SIP Server Setup .................................................................................................................................. 4
   3.1 Open TekSIP to run SIP Server [10.131.5.235:5060] .......................................................................... 4
   3.2 Select Extensions to create SIP user credentials and click Add/ Update ............................................ 4
4. SIP Authentication on Controller ........................................................................................................ 5
5. SIP Clients Configuration ...................................................................................................................... 6
   5.1 SIP Clients#22 (Mac OS) ...................................................................................................................... 6
   5.2 SIP Clients#11 (X-Lite VoIP Phone) ..................................................................................................... 7
6. SIP Authentication Logs on Controller .................................................................................................. 10
   6.1 SIP Clients Log ................................................................................................................................... 10
   6.2 SIP Call Usage .................................................................................................................................... 10
7. Conclusion ........................................................................................................................................... 11
8. Remarks ............................................................................................................................................... 11
1. Introduction

This document is aimed at explaining the practical setup flow of a fundamental feature on the Controller - the external SIP authentication Configuration for IP-based devices, like VoIP phones, which are extremely useful in the conference rooms, office rooms, even the department stores. With QoS/WMM capabilities, the data classification is also available on the Controller. For further configuration please refer to the Controller manual on website.

This technical guide provides administrators with guides to easily setup and configure both SIP authentication server and wired/wireless SIP clients in a desired environment. Logs and Reports on Controller are also shown in the end of the document.
2. Environment Setting

2.1 Architecture Setup

2.2 Device Preparation

- SIP Server: TekSIP Manager (Windows)
- SIP Proxy Server: Controller
- SIP Clients:
  - D-Link SIP Phone (#303): DPH-140S
  - X-lite in Windows (#11): CounterPath version 4.8.4 76589
  - IP Telephone APP Mac OS (#22)

<table>
<thead>
<tr>
<th>Model</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLAN Controller</td>
<td>Controller400</td>
</tr>
<tr>
<td>Access Point</td>
<td>AP100</td>
</tr>
<tr>
<td>SIP Server</td>
<td>TekSIP version 3.7.0.0</td>
</tr>
<tr>
<td>SIP Clients</td>
<td>1. D-Link SIP Phone: DPH-140S</td>
</tr>
<tr>
<td></td>
<td>2. X-lite in Windows: CounterPath version 4.8.4 76589</td>
</tr>
<tr>
<td></td>
<td>3. IP Telephone APP Mac OS</td>
</tr>
</tbody>
</table>

SIP Phones could access IP Address by DHCP or by static IP address, and the extensions number should type in SIP authentication server which TekSIP provides.
3. SIP Server Setup

3.1 Open TekSIP to run SIP Server [10.131.5.235:5060]

There are many 3rd party freeware for SIP authentication servers. Here we selected TekSIP Server as an example for account database. The SIP server IP address with listening port: 5060 should be configured and entered later in Controller to communicate.

3.2 Select Extensions to create SIP user credentials and click Add/ Update

Create a contact that SIP clients would use for dialing up.
4. SIP Authentication on Controller

For the Service Zone to use external SIP authentication. Please make sure SIP Interface Configuration is enabled, and also check SIP authentication in the authentication options.

Enter SIP Server 10.131.5.235 as a trusted registrar in mapped to a desired User Group.
5. SIP Clients Configuration

5.1 SIP Clients#303 (D-Link DPH-140S)

D-Link DPH-140S can be configured by pressing the “Menu” button on the front panel. Enter the settings as shown in the following table. Upon completion, make sure the configuration is saved successfully.

<table>
<thead>
<tr>
<th>Display Name</th>
<th>Autumn</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSL Dialup Enable/ Disable</td>
<td>Disable</td>
</tr>
<tr>
<td>DHCP Enable/ Disable</td>
<td>Enable</td>
</tr>
<tr>
<td>IP address</td>
<td>192.168.1.8</td>
</tr>
<tr>
<td>Subnet</td>
<td>255.255.0.0</td>
</tr>
<tr>
<td>Router IP</td>
<td>192.168.1.254</td>
</tr>
<tr>
<td>DNS server IP</td>
<td>168.95.1.1</td>
</tr>
<tr>
<td>Reg server IP</td>
<td>10.131.5.235</td>
</tr>
<tr>
<td>Reg server Port</td>
<td>5060</td>
</tr>
<tr>
<td>SIP Username</td>
<td>303</td>
</tr>
<tr>
<td>SIP Password</td>
<td>303</td>
</tr>
</tbody>
</table>

5.2 SIP Clients#22 (Mac OS)

Open the Telephone Application on Mac OS and setup a SIP Account. Enter an account according to the TekSIP Server
The SIP client is now authenticated and is able to call other SIP clients

5.3 SIP Clients#11 (X-Lite VoIP Phone)
Open X-Lite on windows and select Softphone>> Account Settings
Enter account information and User Details according to the TekSIP Manager, including account credentials, server IP address and etc.

Upon successful configuration, users are able to utilize the panel to answer calls from 303, shown below as an example, or make a call to 303.
6. SIP Authentication Logs on Controller

6.1 SIP Clients Log

Once the SIP client gets authenticated, the client would be listed on the Online Users List. The Username is the extension from the SIP server, and the device IP address and MAC address are also shown.

![Online Users List](image1)

More details on SIP account events are all displayed in User Events, such as Login, Logout, Admin-Reset and etc.

![User Events](image2)

6.2 SIP Call Usage

Controller series provides SIP Call Usage that could present SIP call details daily, including Start Time, Caller, Callee and Duration (seconds)
7. Conclusion

Administrators can easily setup an external SIP authentication environment combined with Controller wired and wireless deployment. Furthermore, administrators may utilize 3rd party SIP server freeware and any type of SIP devices, such as apps, wired or wireless VoIPs. The Controller series also provides a quick view of Logs and Reports for SIP authentication, authorization and accounting.

8. Remarks

For more information, please contact your local Systems Integrator, or contact support by email.