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COMMUNICATIONS

Yealink
EASY VOIP

Using Call Recording Feature on Yealink SIP T2XP phones

Using Call Recording Feature on Yealink SIP-T2XP Phones

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1. Summary

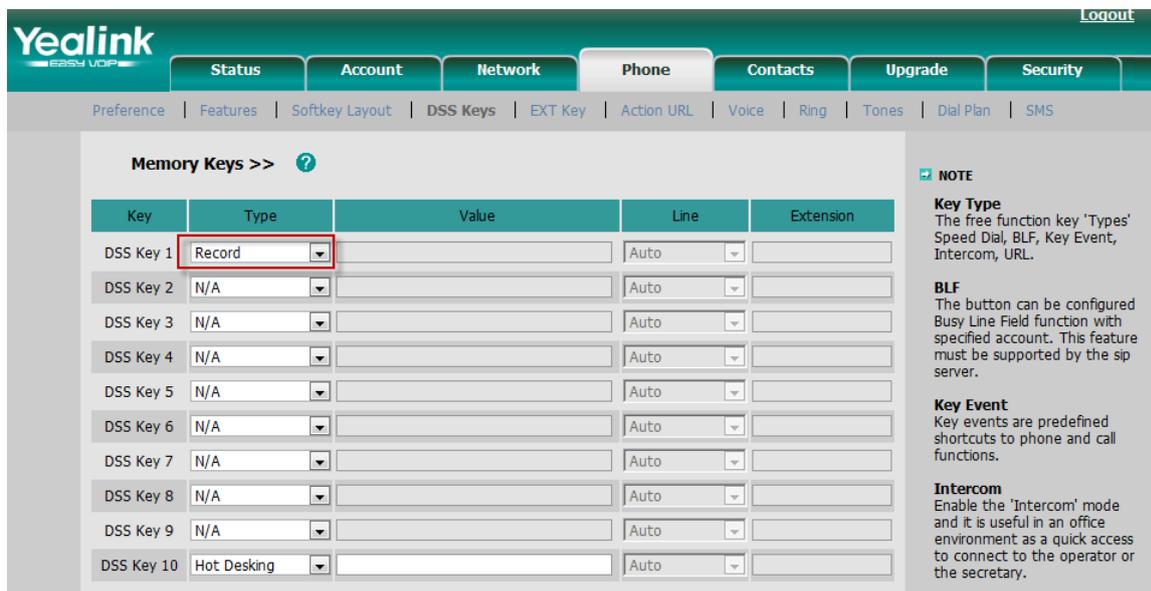
Call recording enables you to record a call. It depends on the support of server and the duration you can record for is also defined by the server. Yealink phones, including T20, T22, T26 and T28, with firmware version not lower than V50, support to set a DSS Key as record button that can be pressed during a call to request a recording to the server. The phones themselves don't have memory to store the recordings, what they can do is only to trigger it on the server and indicate the recording status.

Normally, there are 2 main methods to trigger a recording on a certain server (PBX). One is for the phone to send to the PBX a SIP INFO containing a specific header. The other is for the phone to send an HTTP URL to the PBX. Certain server will know to deal with such messages and decide to start or stop a recording. This document will show you how each method works and how to configure for each.

2. Recording triggered by SIP INFO

2.1 Configurations on the phone

- (1) Via web management through page *Phone* -> *DSS Key*. Any DSS Key can be configured by selecting *Type* as *Record*, as shown below:



- (2) Via phone menu on LCD through *Menu* -> *Features* -> *DSS Keys*. Similar as it is on web page, just to configure any wanted DSS Key as below:



2.2 How the SIP INFO works

2.2.1 Start a recording

Assume that you have DSS Key 1 configured as above, during an active call, if you press this button for the first time, the phone will send out a SIP INFO to the PBX. The SIP message is like:

o.	Time	Source	Destination	Protocol	Info
358	2010-03-26 15:00:32.463	10.1.4.148	192.168.1.199	SIP	Request: INFO sip:614@192.168.1.199:5060
359	2010-03-26 15:00:32.463	192.168.1.199	10.1.4.148	SIP	Status: 100 Trying
360	2010-03-26 15:00:32.463	192.168.1.199	10.1.4.148	SIP	Status: 200 OK


```

Frame 358 (410 bytes on wire, 410 bytes captured)
Ethernet II, Src: XiamenYe_11:30:68 (00:15:65:11:30:68), Dst: Cisco_1b:6b:c2 (00:25:46:1b:6b:c2)
Internet Protocol, Src: 10.1.4.148 (10.1.4.148), Dst: 192.168.1.199 (192.168.1.199)
User Datagram Protocol, Src Port: 5063 (5063), Dst Port: sip (5060)
Session Initiation Protocol
  Request-Line: INFO sip:614@192.168.1.199:5060 SIP/2.0
  Message Header
    Via: SIP/2.0/UDP 10.1.4.148:5063;branch=z9hg4bk1139980711
    From: "827" <sip:827@192.168.1.199>;tag=2066430997
    To: <sip:614@192.168.1.199>;tag=371745247
    Call-ID: 1895019940@10.1.4.148
    CSeq: 2 INFO
    Contact: <sip:827@10.1.4.148:5063>
    Max-Forwards: 70
    User-Agent: Yealink SIP-T28P 2.50.23.1
    Record: on
    Content-Length: 0
    
```

Receiving such a message, the certain supporting server will know to start recording.

2.2.2 Stop the recording

To stop recording, just to press the same button for the second time, with which the phone will send the SIP INFO like below:

No.	Time	Source	Destination	Protocol	Info
204	2010-03-26 15:10:16.023808	10.1.4.148	192.168.1.199	SIP	Request: INFO sip:614@192.168.1.199:5060
205	2010-03-26 15:10:16.023818	192.168.1.199	10.1.4.148	SIP	Status: 100 Trying
206	2010-03-26 15:10:16.023827	192.168.1.199	10.1.4.148	SIP	Status: 200 OK


```

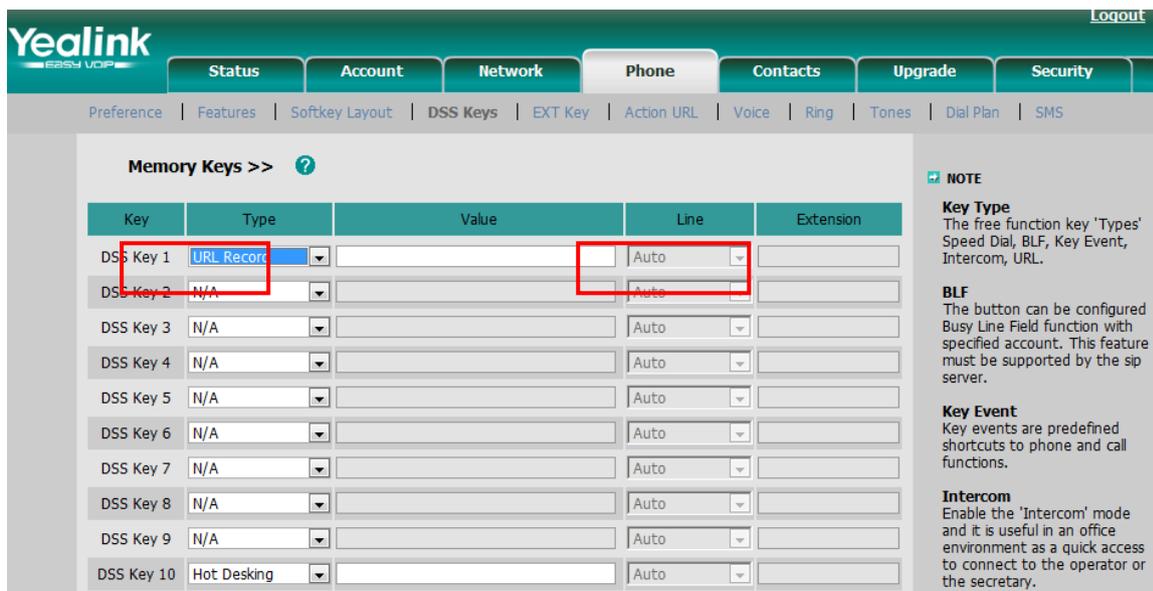
Frame 204 (412 bytes on wire, 412 bytes captured)
Ethernet II, Src: XiamenYe_11:30:68 (00:15:65:11:30:68), Dst: Cisco_1b:6b:c2 (00:25:46:1b:6b:c2)
Internet Protocol, Src: 10.1.4.148 (10.1.4.148), Dst: 192.168.1.199 (192.168.1.199)
User Datagram Protocol, Src Port: 5063 (5063), Dst Port: sip (5060)
Session Initiation Protocol
Request-Line: INFO sip:614@192.168.1.199:5060 SIP/2.0
Message Header
Via: SIP/2.0/UDP 10.1.4.148:5063;branch=z9hg4bk1619489730
From: "827" <sip:827@192.168.1.199>;tag=1831694891
To: <sip:614@192.168.1.199>;tag=2228378244
Call-ID: 1051886688@10.1.4.148
CSeq: 3 INFO
Contact: <sip:827@10.1.4.148:5063>
Max-Forwards: 70
User-Agent: Yealink SIP-T28P 2.50.23.1
Record: off
Content-Length: 0
    
```

Receiving such a message, the certain supporting server will know to stop recording.

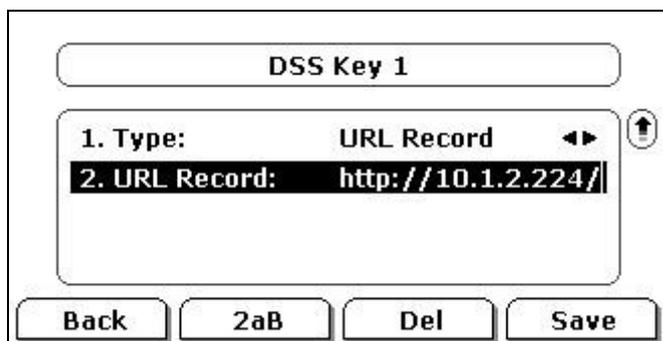
3. Recording triggered by HTTP URL

3.1 Configurations on the phone

- (1) Via web management through page *Phone* -> *DSS Key*. Set any DSS Key by selecting the *Type* as *URL Record* and assigning the *Expansion* with a certain URL. This is tested with Epygi PBX and the URL for this PBX is <http://10.1.2.224/phonerecording.cgi?model=yealink> where IP 10.1.2.224 indicates the SIP server address. As shown below:



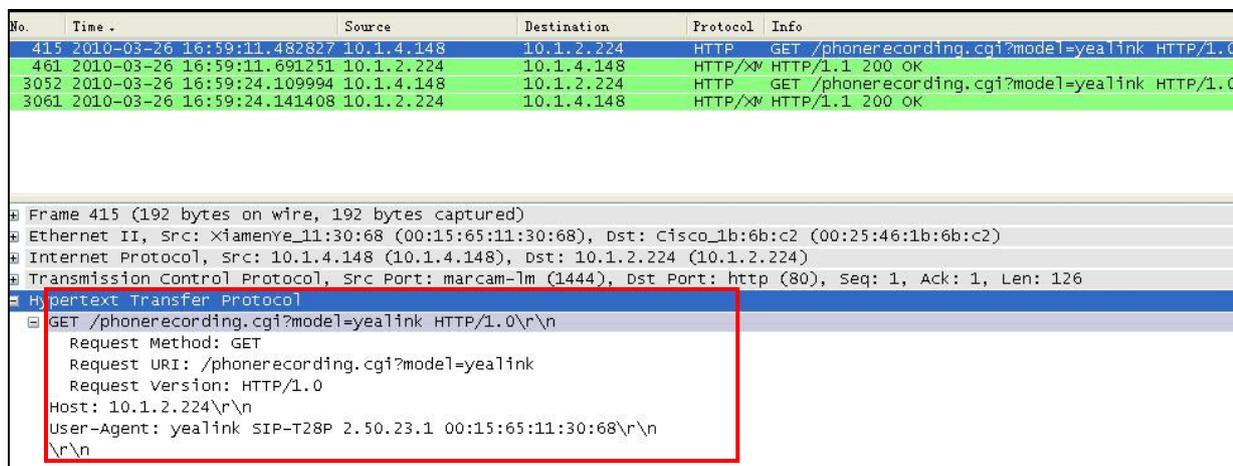
(2) Similarly, it can be configured via phone menu through *Menu -> Features -> DSS Keys*, as shown below:



3.2 How the HTTP URL works

3.2.1 Start a recording

Take Epygi PBX for example, assume that DSS Key 1 is well configured as above, by pressing this button during an active conversation; the phone will send a HTTP GET to the server, like below:



If it is normal, the server will respond with 200 ok as below:

No.	Time	Source	Destination	Protocol	Info
481	2010-03-26 17:12:50.142374	10.1.4.148	10.1.2.224	HTTP	GET /phonerecording.cgi?model=yealink HTTP/1.0
525	2010-03-26 17:12:50.386399	10.1.2.224	10.1.4.148	HTTP/XML	HTTP/1.1 200 OK
1184	2010-03-26 17:12:53.431137	10.1.4.148	10.1.2.224	HTTP	GET /phonerecording.cgi?model=yealink HTTP/1.0
1224	2010-03-26 17:12:53.610762	10.1.2.224	10.1.4.148	HTTP/XML	HTTP/1.1 200 OK


```

Frame 525 (314 bytes on wire, 314 bytes captured)
Ethernet II, Src: cisco_1b:6b:c2 (00:25:46:1b:6b:c2), Dst: Xiamenye_11:30:68 (00:15:65:11:30:68)
Internet Protocol, Src: 10.1.2.224 (10.1.2.224), Dst: 10.1.4.148 (10.1.4.148)
Transmission Control Protocol, Src Port: http (80), Dst Port: mosaixcc (2561), Seq: 1, Ack: 127, Len: 248
Hypertext Transfer Protocol
  HTTP/1.1 200 OK\r\n
    Request Version: HTTP/1.1
    Response Code: 200
    Date: Fri, 26 Mar 2010 09:31:32 GMT\r\n
    Server: Apache\r\n
    Content-Length: 112\r\n
    Connection: close\r\n
    Content-Type: text/xml\r\n
    \r\n
  extensible Markup Language
    <YealinkIPPhoneText>
      <Title>
      </Title>
      <Text>
        The recording session is successfully started
      </Text>
    </YealinkIPPhoneText>
    
```

3.2.2 Stop a recording

During the recording, by pressing the DSS Key 1 for the second time, the recording will be stopped. The same HTTP GET will be sent to the server, and the server will respond with the following 200 OK message:

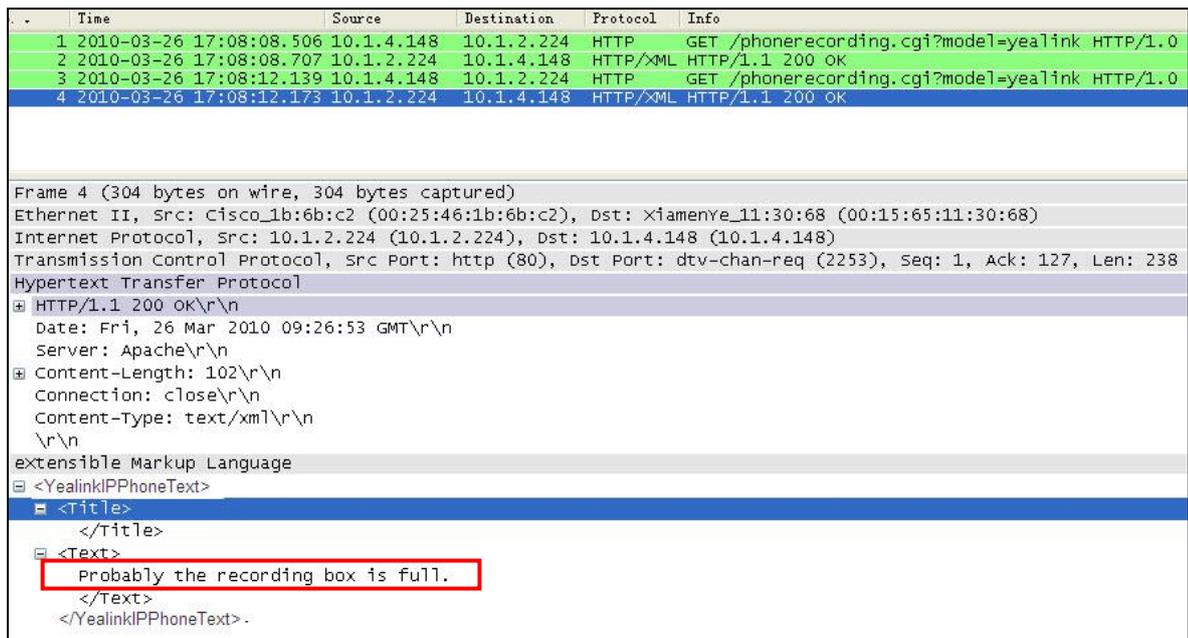
No.	Time	Source	Destination	Protocol	Info
829	2010-03-28 18:14:21.200400	10.1.4.148	10.1.2.224	HTTP	GET /phonerecording.cgi?model=yealink HTTP/1.0
874	2010-03-28 18:14:21.401734	10.1.2.224	10.1.4.148	HTTP/XML	HTTP/1.1 200 OK
2915	2010-03-28 18:14:32.129529	10.1.4.148	10.1.2.224	HTTP	GET /phonerecording.cgi?model=yealink HTTP/1.0
2954	2010-03-28 18:14:32.310412	10.1.2.224	10.1.4.148	HTTP/XML	HTTP/1.1 200 OK


```

Frame 2954 (315 bytes on wire, 315 bytes captured)
Ethernet II, Src: cisco_1b:6b:c2 (00:25:46:1b:6b:c2), Dst: Xiamenye_11:30:68 (00:15:65:11:30:68)
Internet Protocol, Src: 10.1.2.224 (10.1.2.224), Dst: 10.1.4.148 (10.1.4.148)
Transmission Control Protocol, Src Port: http (80), Dst Port: opswmanager (3977), Seq: 1, Ack: 127, Len: 249
Hypertext Transfer Protocol
  HTTP/1.1 200 OK\r\n
    Date: Sun, 28 Mar 2010 10:48:39 GMT\r\n
    Server: Apache\r\n
    Content-Length: 113\r\n
    Connection: close\r\n
    Content-Type: text/xml\r\n
    \r\n
  extensible Markup Language
    <YealinkIPPhoneText>
      <Title>
      </Title>
      <Text>
        The recording session is successfully stopped.
      </Text>
    </YealinkIPPhoneText>
    
```

3.2.3 Error responses:

In some cases, the recording won't succeed because of some reasons. Here're some explanations:
 The recording box is full, which means that there's no space to store the recordings. In this case, if you are trying to start a recording, the server will respond with:



Similarly, there may be the following other response from the server:

- The recording session cannot be started
- The recording cannot be stopped
- This call cannot be recorded

4. Listen to the recordings

It depends on the server. Take URL recording on Epygi PBX as example, the recordings are stored in a special extension named Recording Box, you can simply dial to that extension to listen to the recordings you have made.

5. The LCD icons during a recording

Based on the response from the server, there will be different ICON indications on the LCD:

Circumstance	ICON on LCD display
A recording is started	 appears during recording
A recording cannot be started	 appears for 1 second
A recording cannot be stopped	 appears for 1 second, then goes back to 
The recording box is full	 appears for 1 second

Cannot be recorded



appears for 1 second