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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:

Veali	nk							<u>Logout</u>
Easy vor		Status	Account	Network	Phone	Contacts	Upgrade	Security
Pre	eference	Features	Softkey Layout D	SS Keys EXT Key	Action URL	Voice Ring	Tones Dial Pla	n SMS
	Memo	ry Keys >>	0				NOTE	
	Кеу	Туре		Value	Line	Extension	Key Ty The fre	pe e function key 'Types'
C	DSS Key 1	Record			Auto	v	Speed I Interco	Dial, BLF, Key Event, m, URL.
D	OSS Key 2	N/A	•		Auto	_	BLF The but	ttop cap be configured
D	OSS Key 3	N/A	•		Auto	v	Busy Lin	e Field function with
D	OSS Key 4	N/A	•		Auto	_	must be	supported by the sip
D	OSS Key 5	N/A	•		Auto	v	Key Fy	ent
D	OSS Key 6	N/A	•		Auto	_	Key eve shortcu	nts are predefined ts to phone and call
D	OSS Key 7	N/A	•		Auto	v	function	IS.
D	OSS Key 8	N/A	•		Auto	_	Enable 1	m che 'Intercom' mode
D	OSS Key 9	N/A	•		Auto	v	and it is environ	useful in an office ment as a quick access
D	SS Key 10	Hot Desking	•		Auto	_	to conn the sec	ect to the operator or retary.

(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:

D	SS Key 1	
1. Type:	Key Event	41
2. Key Type:	Record	••

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:

D.	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
500	2010-03-26 15:00:32.463	192.108.1.199	10.1.4.148	SIP	Status: 200 OK
	252 (112)	44 A L	IS .		
Fran	1e 358 (410 bytes on wire	e, 410 bytes captu	red)		
Ethe	ernet II, SrC: XiamenYe_	LI:30:68 (00:15:65	:11:30:68), DST:	1 100 (1	J:6D:C2 (UU:25:46:LD:6D:C2)
LIGOR	Potocol, SrC: 10.1	Dont: 5062 (5062)	8), DSU: 192.108.	I.I33 (1	[92.108.1.199]
Soci	ion Initiation Duotocol	Purt: 3065 (3065)	, DSC PORC: SIP (5060)	
DED2	quest_lipe: INEO sin:61/	10107 168 1 100.50	60 STP/2 0		
	ssade Header	+&192.100.1.199.00	00 SIF/2.0		
Ŧ	Via: STP/2 0/UDP 10 1 4	148.5063.branch=z	9hG4hk1139980711		
Ŧ	From: "827" <sin:827@193< td=""><td>2.168.1.199>:tag=2</td><td>066430997</td><td></td><td></td></sin:827@193<>	2.168.1.199>:tag=2	066430997		
(H)	To: <sin:614@192.168.1.1< td=""><td>1995:tan=371745247</td><td>000450557</td><td></td><td></td></sin:614@192.168.1.1<>	1995:tan=371745247	000450557		
	call-TD: 1895019940@10.1	L.4.148			
(H)	CSeq: 2 INFO				
Ŧ	Contact: <sip:827@10.1.4< td=""><td>4.148:5063></td><td></td><td></td><td></td></sip:827@10.1.4<>	4.148:5063>			
(Aug)	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:

o.	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
Fran	ie 204 (412	bytes on v	wire, 4	12 bytes captur	red)		
Ethe	ernet II, Sr	rc: Xiamen	re_11:3	30:68 (00:15:65:	:11:30:68), Dst: Ci	sco_1b:6	b:c2 (00:25:46:1b:6b:c2)
Inte	rnet Proto	iol, Src: 1	10.1.4	148 (10.1.4.148	3), Dst: 192.168.1.	199 (192	.168.1.199)
User	Datagram R	protocol, s	Src Por	rt: 5063 (5063),	, Dst Port: sip (50	60)	
Sess	ion Initia	ion Proto	col				
	quest-Line:	: INFO sip	:614@19	92.168.1.199:500	50 SIP/2.0		
😑 Me	essage Heade	er					
Ŧ	via: SIP/2.	0/UDP 10.1	1.4.148	3:5063;branch=z9	Эһб4ҌҜ1619489730		
E	From: "827"	' <sip:8270< td=""><td>9192.10</td><td>58.1.199>;tag=18</td><td>331694891</td><td></td><td></td></sip:8270<>	9192.1 0	58.1.199>;tag=18	331694891		
E	To: <sip:61< td=""><td>L4@192.168.</td><td>.1.199</td><td>;tag=2228378244</td><td>1</td><td></td><td></td></sip:61<>	L4@192.168.	.1.199	;tag=2228378244	1		
12220	Call-ID: 10	051886688@	10.1.4	148			
Ŧ	CSeq: 3 INF	=0					
Ŧ	Contact: <s< td=""><td>5ip:827@10.</td><td>.1.4.14</td><td>18:5063></td><td></td><td></td><td></td></s<>	5ip:827@10.	.1.4.14	18:5063>			
	Max-Forward	ds: 70					
	User-Agent	Yealink 9	SIP-T2	3P 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 <u>http://10.1.2.224/phonerecording.cgi?model=yealink</u> where IP 10.1.2.224 indicates the SIP server address. As shown below:

Vealink							<u>Loqout</u>
Easy VOP	Status	Account	Network	Phone	Contacts	Upgrade	Security
Preference	Features So	oftkey Layout 📗 🛛	SS Keys EXT Key	Action URL	Voice Ring	Tones Dial Pla	n SMS
Mem	iory Keys >> (0				NOTE	
Key	Туре		Value	Line	Extension	Key Ty The fre	oe e function key 'Types'
DS5 Key 1	1 URL Record	•		Auto	×	Speed I Interco	n, URL.
DS <mark>S Key (</mark>	2 N/A	•	L	Auto		BLF The but	top cap be configured
DSS Key 3	3 N/A	•		Auto	-	Busy Lin	e Field function with
DSS Key 4	4 N/A	•		Auto	-	must be	supported by the sip
DSS Key S	5 N/A	•		Auto		Kov Fu	t
DSS Key 6	5 N/A	•		Auto	-	Key eve	nts are predefined
DSS Key 3	7 N/A	•		Auto		function	is.
DSS Key 8	B N/A	•		Auto	-	Interco	m 'he 'Intercom' mode
DSS Key 9	9 N/A	•		Auto	-	and it is	useful in an office
DSS Key 1	0 Hot Desking	•		Auto	-	to conn the sec	ect to the operator or retary.

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

1. Type: L	JRL Record 🔷 🔸
2. URL Record: h	nttp://10.1.2.224/

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:

Time .	Source	Destination	Protocol	Info		
2010-03-26 16:59:11.482827	10.1.4.148	10.1.2.224	HTTP	GET /phonerecording.cgi?model=yealink HTTP/1.0		
2010-03-26 16:59:11.691251	10.1.2.224	10.1.4.148	HTTP/X₩	НТТР/1.1 200 ОК		
2010-03-26 16:59:24.109994	10.1.4.148	10.1.2.224	HTTP	GET /phonerecording.cgi?model=yealink HTTP/1.0		
2010-03-26 16:59:24.141408	10.1.2.224	10.1.4.148	HTTP/XM	НТТР/1.1 200 ОК		
€ Frame 415 (192 bytes on wire, 192 bytes captured)						
ernet II. Src: XiamenYe 11:	0:68 (00:15:65:11	:30:68). Dst: Cis	co 1b:6b	:c2 (00:25:46:1b:6b:c2)		
ernet Protocol. Src: 10.1.4.	148 (10.1.4.148).	Dst: 10.1.2.224	(10.1.2.	224)		
smission Control Protocol	Src Port: marcam-	lm (1444) DST PO	rt · httr	(80) Sec. 1 Ack: 1 Len: 126		
ertext Transfer Protocol	Sie rorer marcam	() (14449), 000 FO	i ci ilcep	(00), 500, 1, ACC 1, 200, 120		
T /phonerecording.cgi?mode	=vealink HTTP/1.0	\r\n				
Request Method: GET						
Request URT: /nhonerecordir	na cai?model=veali	nk				
Request Viri / phone intro () ()						
JSC. 10.1.2.224 (F (F)	2 50 22 4 00.45.0	5 - 1 1 - 2 0 - C 0 \ - \ -				
er-Agent: yealink SIP-T28P	2.30.23.1 00:15:6	2:TT:20:08/L/U				
'\n						
	Time - 2010-03-26 16:59:11.482827 2010-03-26 16:59:24.109994 2010-03-26 16:59:24.109994 2010-03-26 16:59:24.141408 me 415 (192 bytes on wire, 1 arnet II, Src: xiamenye_11:3 ernet Protocol, Src: 10.1.4. semission Control Protocol er /phonerecording.cgi?model Request Method: GET Request Wersion: HTTP/1.0 Dost: 10.1.2.224/n\n ser-Agent: yealink SIP-T28P \n	Time - Source 2010-03-26 16:59:11.691251 10.1.4.148 2010-03-26 16:59:24.109994 10.1.2.224 2010-03-26 16:59:24.109994 10.1.4.148 2010-03-26 16:59:24.141408 10.1.2.224 ne 415 (192 bytes on wire, 192 bytes captured arnet II, Src: xiamenve_11:30:68 (00:15:65:11) ernet Protocol, Src: 10.1.4.148 (10.1.4.148), smission Control Protocol, Src Port: marcamentext Transfer Protocol ET /phonerecording.cgi?model=yealink HTTP/1.0 Request WeI: /phonerecording.cgi?model=yeali Request Version: HTTP/1.0 Dst: 10.1.2.224\r\n ser-Agent: yealink SIP-T28P 2.50.23.1 00:15:6	Time - Source Destination 2010-03-26 16:59:11.432827 10.1.4.148 10.1.2.224 2010-03-26 16:59:11.691251 10.1.2.224 10.1.4.148 2010-03-26 16:59:24.109994 10.1.4.148 10.1.2.224 2010-03-26 16:59:24.141408 10.1.2.224 10.1.4.148 2010-03-26 16:59:24.141408 10.1.2.224 10.1.4.148 2010-03-26 16:59:24.141408 10.1.2.224 10.1.4.148 2010-03-26 16:59:24.141408 10.1.2.224 10.1.4.148 2010-03-26 16:59:24.141408 10.1.2.224 10.1.4.148 2010-03-26 16:59:24.141408 10.1.2.224 10.1.4.148 2010-03-26 16:59:24.141408 10.1.2.224 10.1.4.148 2010-03-26 16:59:24.141408 10.1.2.224 10.1.2.224 2010-03-26 16:59:24.141408 10.1.4.148 10.1.2.224 2010-03-26 16:59:24.141408 10.1.2.224 10.1.2.224 2010-03-26 16:59:21:0.1.2.224/r\n 2010-01	Time - Source Destination Protocol 2010-03-26 16:59:11.691251 10.1.4.148 10.1.2.224 HTTP 2010-03-26 16:59:24.109994 10.1.4.148 10.1.2.224 HTTP/XW 2010-03-26 16:59:24.109994 10.1.4.148 10.1.2.224 HTTP/XW 2010-03-26 16:59:24.109994 10.1.4.148 10.1.2.224 HTTP 2010-03-26 16:59:24.141408 10.1.2.224 10.1.4.148 HTTP/XW ne 415 (192 bytes on wire, 192 bytes captured) ernet Protocol ernet Protocol, Src: NiamenYe_11:30:68 (00:15:65:11:30:68), Dst: Cisco_1b:6k ernet Protocol, Src: 10.1.4.148 (10.1.4.148), Dst: 10.1.2.224 (10.1.2. 10.1.2.224 (10.1.2. ertext Transfer Protocol Src: Port: marcam-lm (1444), Dst Port: http ertext Transfer Protocol ET /phonerecording.cgi?model=yealink HTTP/1.0\r\n Request Method: GET Request Version: HTTP/1.0 ser-Agent: yealink SIP-T28P 2.50.23.1 00:15:65:11:30:68\r\n osis: 10.1.2.24\r\n		

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

481 2010-03-26 17:12:50.142374 10.1.4.148 10.1.2.224 HTTP GET /phonerecording.cgi?model=yealink HTTP 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 HT 1224 2010-03-26 17:12:53.610762 10.1.2.224 HTTP GET /phonerecording.cgi?model=yealink HT 1224 2010-03-26 17:12:53.610762 10.1.2.224 HTTP GET /phonerecording.cgi?model=yealink HT	P/1.0
525 2010-03-26 17:12:50.386399 10.1.2.224 10.1.4.148 НТТР/ХМL НТТР/1.1 200 ок 1184 2010-03-26 17:12:53.431137 10.1.4.148 10.1.2.224 НТТР GET /phonerecording.cgi?model=yealink HT 1224 2010-03-26 17:12:53.610762 10.1.2.224 10.1.4.148 НТТР/ХМL НТТР/1.1 200 ок	P/1.0
1184 2010-03-26 17:12:53.431137 10.1.4.148 10.1.2.224 НТТР GET /phonerecording.cgi?model=yealink HT 1224 2010-03-26 17:12:53.610762 10.1.2.224 10.1.4.148 НТТР/XML НТТР/1.1 200 ок	P/1.0
1224 2010-03-26 17:12:53.610762 10.1.2.224 10.1.4.148 НТТР/ХМL НТТР/1.1 200 ок	
Frame 525 (314 bytes on wire 314 bytes cantured)	
Thermet II. Src: cisco 1h:6h:c2 (00:25:46:1h:6h:c2). Dst: xiamenye 11:30:68 (00:15:65:11:30:68)	
Interpet Protocol Spec: 10.1.2.224 (10.1.2.224) Det: 10.1.4.148 (10.1.4.148)	
Transmission Control Protocol, Src Port: http://doi.org/10.1011/01400/2011.500	
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	
extensible Markup Language	
□ <yealinklpphonetext></yealinklpphonetext>	
□ <title></title>	
The recording session is successfully started	

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:

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	НТТР/1.1 200 ОК
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
2914 2010-03-28 18.14.52.510412	10.1.2.224	10.1.4.140	THE PAPE	HTTP/IT 200 OK
Frame 2954 (315 bytes on wire, 3	15 bytes captured)		
Ethernet II, Src: Cisco_1b:6b:c2	(00:25:46:1b:6b:	c2), Dst: ×iamer	Ye_11:30:	:68 (00:15:65:11:30:68)
Internet Protocol, Src: 10.1.2.2	24 (10.1.2.224), 1	Dst: 10.1.4.148	(10.1.4.1	.48)
Transmission Control Protocol, S	rc Port: http (80), Dst Port: ops	wmanager	(3977), Seq: 1, Ack: 127, Len: 249
Hypertext Transfer Protocol				
⊞ HTTP/1.1 200 OK\r\n				
Date: Sun, 28 Mar 2010 10:48:3	9 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				
<yealinklpphonetext></yealinklpphonetext>				
🖃 <title></title>				
🗏 <text></text>				
The recording session is s	uccessfully stopp	ed.		

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:

	Time	Source	Destination	Protocol	Info
1	2010-03-26 17:08:08.506	10.1.4.148	10.1.2.224	HTTP	GET /phonerecording.cqi?model=yealink HTTP/1.0
2	2010-03-26 17:08:08.707	10.1.2.224	10.1.4.148	HTTP/XML	НТТР/1.1 200 ОК
3	2010-03-26 17:08:12.139	10.1.4.148	10.1.2.224	HTTP	GET /phonerecording.cgi?model=yealink HTTP/1.0
- 4	2010-03-26 17:08:12.173	10.1.2.224	10.1.4.148	HTTP/XML	HTTP/1.1 200 OK
Frame	4 (304 bytes on wire, 3	04 bytes cap	tured)		
Ether	net II, Src: Cisco_1b:6b	:c2 (00:25:4	6:1b:6b:c2),	Dst: Xian	nenYe_11:30:68 (00:15:65:11:30:68)
Inter	net Protocol, Src: 10.1.	2.224 (10.1.	2.224), Dst:	10.1.4.14	48 (10.1.4.148)
Trans	mission Control Protocol	, Src Port:	http (80), D	st Port: (dtv-chan-req (2253), Seq: 1, Ack: 127, Len: 238
Hyper	text Transfer Protocol				
HTT	Р/1.1 200 ок\r∖n				
Dat	e: Fri, 26 Mar 2010 09:2	6:53 GMT\r\n			
Ser	ver: Apache\r\n				
⊞ Con	tent-Length: 102\r\n				
Con	nection: close\r\n				
Con	tent-Type: text/xml\r\n				
\r\	n				
exten	sible Markup Language				
⊟ <yea< td=""><td>alinklPPhoneText></td><td></td><td></td><td></td><td></td></yea<>	alinklPPhoneText>				
⊟ <	Title>				
Ξ <	Text>				
	Probably the recording	box is full.			
<	/YealinkIPPhoneText>				

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
The recording box is full	appears for 1 second

Cannot be recorded

appears for 1 second