



Com.X HTTP Dialler

White Paper (Specification)

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Document History

Version	Date	Description of Changes
1.0	2012/09/10	Initial
1.1	2012/10/01	Added functionality

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1 Introduction

1.1 Overview

A secure HTTP dial feature is introduced for certain Com.X PBX installations. The external specification is described here, for integration with 3rd party applications.

This feature is available from comx-gui 1.2.20 (incorporating comma-gui 1.2.105) onward.

1.2 Background

In agent/call centre environments, it is useful to have a generic and secure dial facility for the Com.X PBX. Using simple HTTP to initiate the facility ensures easy integration with 3rd party applications.

2 Specification

2.1 HTTP Dial

HTTP Dial is accomplished through a simple URL query string as follows:

[http://pbx_ip/commagui/call?orig=ext&dest=dest\[&optional1\]\[&optional2\]...](http://pbx_ip/commagui/call?orig=ext&dest=dest[&optional1][&optional2]...)

The parameters (in italics>) are as follows:

pbx_ip	The ip address or name of the Com.X PBX on the local network
ext	The local user extension number, e.g. 1000
dest	The number to dial, e.g. +27211234567. This number is any valid number that may be dialed from the extension, including feature codes such as *65.
timeout (optional)	Timeout for local user alert in seconds, default is 15 seconds
wait (optional)	Wait for <i>condition</i> before responding: none – return immediately local (default) – return after local extension is answered or timeout complete – return after call is completed i.e. destination is answered, or some error condition occurs
cidname (optional)	Set callerid name for local extension display (default is Auto)
cidnum (optional)	Set callerid number for local extension display (default is <i>dest</i>)
pin (optional)	Set CDR accountcode to provided PIN, and bypass any Outbound PIN requirement

Example Usage 1:

http://192.168.0.5/commagui/call?orig=1000&dest=*65

The above URL will ring the handset of user 1000, with a CLI message of “Auto(*65)”. When user 1000 picks up (if within 15 sec), the call will continue to the internal *65 feature code (identify my extension).

Example Usage 2:

<http://192.168.0.5/commagui/call?orig=1000&dest=+27218990000&timeout=10&wait=complete&cidname=MyClient>

The above URL will ring the handset of user 1000, with a CLI message of “MyClient(+27218990000)”. When user 1000 picks up (if within 10 sec), the call will continue by dialling the destination while the user hears the normal ringback tone.

HTTP Response is as follows:

Condition	HTTP response	Content
Normal (wait=none)	HTTP/1.1 200 OK	text/plain: “ <i>ext</i> is ringing”
Normal (wait=local)	HTTP/1.1 200 OK	text/plain: “ <i>ext</i> has answered, dialing <i>dest</i> ”
Normal (wait=complete)	HTTP/1.1 200 OK	text/plain: “ <i>dest</i> has answered”
Timeout (local extension did not pick up)	HTTP/1.1 500 Call failed: ... Channel 'SIP/9190001' is not available	
Call failed (miscellaneous reasons)	HTTP/1.1 500 Call failed: <i>some message</i>	
Unauthorized (e.g. <i>ext</i> does not match login credentials)	HTTP/1.1 403 Forbidden	
Syntax error in URL	HTTP/1.1 400 <i>some message</i>	

For testing purposes, a standard browser may be used to login and activate calls as per the above method.

2.2 Dynamic Behaviour

The client application should keep track of queries and responses in order to prevent multiple calls being originated inadvertently. If the local extension is busy on a call (either through http origination or normal usage), the http call will still be attempted. The response depends on the extension type:

SIP clients will typically accept and display the second call

Analog extensions will accept the second call if call waiting is enabled

Rejected calls will be indicated through the “Call failed” (HTTP 500) responses detailed above.

2.3 Security

2.3.1 HTTP Security

Http BASIC authorization is used for security. The authorization credentials must be separately maintained using the /etc/commagui/call.htpasswd file on the Com.X. This file is updated from the Com.X shell as follows:

```
sudo htpasswd -b /etc/commagui/call.htpasswd <ext> <password>
```

where <ext> is the extension number and <password> is any password desired.

To delete a user, use the following command:

```
sudo htpasswd -D /etc/commagui/call.htpasswd <ext>
```

The username/password may be embedded in the call URL by adding before the pbx_ip as follows:

```
http://ext.password@pbx_ip/...
```

If the *ext* parameter in the query string does not match the authenticated username, the request will fail.

One exception is the username admin, password c@11Me which is accepted for any extension. It is advised to change this password using the above command.

2.3.2 Outbound PIN Override

If the outbound route selected by the destination number requires manual PIN input, the user will normally be voice prompted as usual for the PIN. However, if the pin= option is provided in the dial URL, the PIN supplied by this option is used to set the account code in the CDR. In this case, the voice prompt for PIN is then completely bypassed. Any PIN is permitted in the URL, it is only used for CDR record keeping purposes.