

Asterisk iCalendar How-to

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Abstract

This How-To shows how a simple CGI-file can be used to serve your Asterisk call-log as an iCalendar-file. You can subscribe to the calendar using your favorite standard-conform calendar program to see your call history. Although this is no *enterprise*-solution, it is a portable solution for private networks when limited resources (memory / speed) are an issue.

1 Introduction

This is the third article in the series of mini How-to articles on configuring Asterisk on limited resource devices such as OpenWRT-routers. Running on a device with limited resources (cpu-speed / memory), part of the problem is to use only the standard tools available, especially that are part of the commands provided by the *busybox*. Focusing on these basic commands also ensures that the solution will most likely run on other systems as well.

This article shows how a simple CGI script can be used to serve Asterisk standard call - history file as an iCalendar-conform file. It has been tested on a Linksys WRT54GS v. 1.1 running OpenWRT *white russian rc4* and the *asterisk-cvs* package. This solution cannot be considered to be *enterprise-grade*, because of the lack of authentication and filtering. When more resources are available, more information (such as received voicemail and a vCard of the other party) can also be linked to each call event. When you need help implementing such a more advanced solution, feel free to contact the author.

2 CGI-file

The iCalendar file format defined by the *Internet Engineering Task Force (IETF)* in RTF 2245. The format became especially popular when Apple introduced its calendar program *iCal* and made the idea of subscribing to remote calendars popular. But since the format is an open standard, many other calendar programs such as Mozilla and Outlook (claim to) support it. Our CGI-script shown here transforms the data from the Asterisks caller log into a valid iCalendar file. It does neither do any security checks nor does it filter the log for an individual users, but simply transforms every single entry of the cdr-file into a single event.

If the module *cdr.csv.so* is loaded into Asterisk, Asterisk is logging (by default) all of its calls into a file located in `/var/log/asterisk/cdr-csv/Master.csv`. Please ensure, that the user the web-server runs as has the permission to read this file.¹ A simple way to ensure the correct times in the calendar displayed is to include only GMT-times in the calendar served. Since the focus here is not on transforming times and dates, the script assumes that Asterisk is logging GMT - times. An easy way to do this, is to set the time-zone of your machine to GMT.² The calendar program will recognize the times as GMT and will display them based according to the settings of the local machine.

¹On OpenWRT, there is nothing to worry about, since httpd runs as root.

²On OpenWRT, the time-zone can be set to GMT by the command `echo "GMT-0" > /etc/TZ` .

```
#!/bin/ash
echo -e "Content-Type: text/calendar\n"
echo -e "BEGIN:VCALENDAR\nVERSION:2.0\nPRODID:-//voiscout.de//iCal 2.0//EN"
cat /var/log/asterisk/cdr-csv/Master.csv | \
sed -e 's/"\([0-9]\{4\}\)-\([0-9]\{2\}\)-\([0-9]\{2\}\) \([0-9]\{2\}\):'\
'\([0-9]\{2\}\):\([0-9]\{2\}\)"/\1\2\3T\4\5\6Z/g;s/"\([^\]*\)"/\1/g' | \
awk -F"," 'BEGIN {OFS=""}{print "BEGIN:VEVENT\nDTSTART:"$10"\nDTEND:"$12"\n"\
SUMMARY:Call "$5" to "$3"\nDESCRIPTION:Status:"$15"\nEND:VEVENT"}'
echo "END:VCALENDAR"
```

Because this shell script is sensitive to trailing *whitespace*, ensure that the lines end right after the *backspace* (`\`). The file has to be located in the *cgi-bin*-directory³ and to be executable⁴ to be correctly served by the web server.

3 Access-Example

You can use any web browser to download the calendar from the web server. But since your browser will most likely not understand the iCalendar format, this way of access is probably not very useful except for testing purposes. Instead, you should use your calendar program (such as iCal on MacOSX) to subscribe to the URL (such as <http://192.168.1.1/cgi-bin/calls.cgi>) and see the events of the retrieved calendar nicely displayed.

Disclaimer

Please contact the author in case you find any errors or think of any ways on how to improve this paper.

Although the information and code has been edited carefully and seems to work as expected on our machine with our data, please be advised that any use of it is at your own risk and without any warranty. Using the information / code given in this paper may result in loss of data as well as damage and (costly) malfunction of your equipment. Since the script has no access control, make sure it can only be accessed by authorized persons.

³On OpenWRT, this directory is by default `/www/cgi-bin`.

⁴Use `chmod +x filename` to make a file executable.