

## Re: Embedded SMTP Problems

**Source:** <http://linux.derkeiler.com/Newsgroups/comp.os.linux.misc/2004-08/1287.html>

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**From:** P Gentry (*rdgentry1\_at\_cablelynx.com*)

**Date:** 08/16/04

Date: 16 Aug 2004 11:26:48 -0700

jecottrell@comcast.net (John) wrote in message

news:<6a7c1ec9.0408150925.165eb1f9@posting.google.com>...

> *I am currently in the midst of a project that utilizes an AXIS 2420  
> network camera (Linux based) with a serial connection to a Creative  
> External MODEM Blaster. The camera has both a serial connection and an  
> Ethernet connection available (it is a web server.) All my  
> intereaction with the camera is browser based over the ethernet  
> connection. I can also setp a dial-up connection over the serial port  
> for browser based interaction with the camera.*

>

> *The camera supports a feature that when movement is detected within  
> the camera's field of view a frame of video is captured and the camera  
> will then dial out to an ISP and send a SMTP email with the frame of  
> video within it.*

>

> *(I have a data tap in-line with the serial connection so that I can  
> monitor the TX & RX between the MODEM and camera.)*

So you don't have a development board from Axis? The data tap would be useful if you had a means of capturing the frames going to it and decoding them :-(

> *The problem that I have run into is this: It appears that when the  
> image file size exceeds a size of roughly 10KB the email does not go  
> through. (By that I mean that the log within the camera shows a  
> succesful connection and transfer, the data tap indicates, as far as I  
> can tell, a normal connection and SMTP transfer. But the email never arrives.*

It's my understanding (from Axis web site) that the built in email feature sends email to the ISP's mta -- which then will forward it upstream. Is this the way you're setup? The logs indicate that there are no "local" errors being generated. What does "not getting through" mean? Nothing placed on the ISP's server, nothing forwarded from the ISP, hijacked by passing aliens in saucers?

> *I don't think it's an ISP limitation on file size since 10KB  
> is pretty small these days.) My hunch is either an invalid email is  
> generated once a certain file size is exceeded or there is a buffer*

- > *problem between the camera and MODEM and it doesn't rear its ugly head*
- > *until a certain email size is reached.*

I think there is a 4 MB buffer to hold the images (out of a total of 16 MB on board the cam). Tried reducing the frame rate of the cam? I would doubt a transfer problem between cam and modem -- it's an RS232 connection (though you may need to check that the cam and the modem are correctly synching in all cases) which are "usually" reliable enough for this sort of thing.

Can you capture the email/attachment on the local machine and send it "manually" via a mail client? About the only ready way I can think of to test for a corrupted email.

- > *My current capabilities are:*
- > *Linux – Clueless (I've got a Linux box running to fiddle with,*
- > *that's about it.)*
- > *FTP – I can connect with the camera and wander about within the*
- > *files on it*

This is a "local" access to the in-built ftp server on the camera chip? Can you dial \_into\_ the cam?

- > *Serial – I have a data tap in-line between the camera and dial-up*
- > *MODEM and I can observe the ASCII data between each.*

The docs were paltry at Axis and I didn't have an interest in looking through their "hello world" examples. The alert script link is below.

- > *My questions are these:*
- >
- > *Is there a way to troubleshoot MODEM communications and email other*
- > *than the data tap I'm currently using?*

The modem should simply forward whatever it is given -- my thought was to check if Creative external modems were OK with Linux and it seems they are. Whether there is a glitch with the on-board chip Linux and the modem -- who knows. I assume you are using the modem connected to the camera's serial port 2? Have you tried to send -- is it possible to configure? -- via an mta on the Linux computer with the modem connected to the Linux computer rather than directly from the camera?

- > *Is there a way to determine whether the camera is producing an invalid*
- > *email once the file size gets to large? (I have a hunch that it's the*
- > *camera...I've found several bugs so far. I have yet to receive any*
- > *help from AXIS on the issues I've had up to this point, so don't*
- > *suggest that I contact them :-)*

I find this not likely as this sort of bug would show up on everyone's installation. Email headers are incredibly simple and the jpeg is a binary attachment. I haven't looked closely at the script however.

- > *How would I start a terminal session with the camera through the Ethernet connection?*

You need to setup/configure the telnetd (or the in.telnetd started by inetd) on the camera. Presumably you can do this via the admin page for the camera and I imagine it's a very straight forward (unmodified) telnet service. See below.

- > *I apologize for not being able to provide more/detailed information.*

You will have to do so if you expect anything other than generalities in response. Unless you just happen to catch the eye of someone familiar with your setup (ie., Axis 2420, Creative modem, Linux computer) you will have to inform us of the specifics. See below.

- > *My Linux experience prevents it at this point. If a certain detail would shed more light provide me the means to extract that detail from my situation. (A previous post response asked what version of Linux was being used. Since I can't open a terminal window to "% uname -r" the camera I couldn't tell you....)*

According to Axis you're running a 2.0(e) kernel -- the e means embedded, I think.

- > *Any Linux expertise and/or MODEM/email help would be greatly appreciated. I guess I should qualify the request by saying I'm not looking for someone to solve my problems. I need reading material recommendations, websites, debugging tools, Linux wisdom, etc.*
- >
- > *Thanks,*
- >
- > *John Cottrell*

First thing -- giving us info.

I had to dig this up from the Axis site -- something you could have done yourself. If you don't understand the info, save us time by providing links ;-)

Second, be specific when relating hardware info -- as exact as possible, eg., the `_exact_` model of your modem.

Third, be specific about your setup -- ascii art `_is_` helpful sometimes so we don't have to guess. On this point this is my guess:  
-- the cam is connected to a Linux box via lan connection or directly via x-over  
-- the cam is connected directly to modem which dials your ISP and attempts to send email alerts with a jpeg attachment via a mish script (supplied by Axis?)  
-- you don't have a better/alternative means of sending the alerts (scripted modem dial-up sessions are not always reliable without some extensive tweaking)

Fourth, try to be specific about what you *\_have\_* tried yourself and what results/messages you got. This is pretty tough -- at least you posted further info re: file size ;-)

Do *\_all\_* the other "upload" methods (ftp and http) work? Can you ftp the image and send an email via the modem to your ISP using an email client on the Linux box? Can you get help from your ISP to see if there is a transfer problem during the email sessions.

*>From the info provided, here is what I would try:*

-- set the image size/compression to get as small a usable image as possible. Axis indicates you should be sending 5-10K attachments  
-- if the problems are occasional (ie., you "usually" get the email out OK) I would suspect random connection problems  
-- if the problems are the usual thing I would suspect config problems. This could include any number of things, from the smtp client in cam, the script, the modem, the smtp server at your ISP and/or any incompatibilities introduced along the way. You'll have to roll up your sleeves to fix this -- another reason for providing us as much info about your setup as possible.

Here are the most "useful" links I found at Axis:

[http://www.axis.com/techsup/cam\\_servers/tech\\_notes/index.htm](http://www.axis.com/techsup/cam_servers/tech_notes/index.htm)

[http://www.axis.com/techsup/cam\\_servers/dev/product\\_interface\\_guide.htm](http://www.axis.com/techsup/cam_servers/dev/product_interface_guide.htm)

[http://www.axis.com/techsup/cam\\_servers/tech\\_notes/modem\\_ftp.htm](http://www.axis.com/techsup/cam_servers/tech_notes/modem_ftp.htm)

(note the short list of "supported" modems in above note)

[http://www.axis.com/techsup/cam\\_servers/tech\\_notes/telnet\\_support.htm](http://www.axis.com/techsup/cam_servers/tech_notes/telnet_support.htm)

(tells you how to set up the telnet server)

[http://www.axis.com/techsup/cam\\_servers/dev/php.htm](http://www.axis.com/techsup/cam_servers/dev/php.htm)

[http://www.axis.com/techsup/cam\\_servers/tech\\_notes/script\\_guide.pdf](http://www.axis.com/techsup/cam_servers/tech_notes/script_guide.pdf)

(I guess these are the included scripts -- see p. 17, smtpclient)

And the following ????

[http://www.axis.com/techsup/cam\\_servers/tech\\_notes/mtu.htm](http://www.axis.com/techsup/cam_servers/tech_notes/mtu.htm)

<http://www.axis.com/products/video/camera/how.htm>

<http://developer.axis.com/download/>

[http://www.axis.com/techsup/cam\\_servers/tech\\_notes/2120buffer.htm](http://www.axis.com/techsup/cam_servers/tech_notes/2120buffer.htm)

<http://www.bomara.com/AXIS/cctv/2420.htm>

That's about all I'm good for this round. The problem/technology seemed interesting, so I put in my own leg work -- not normally done around here as a rule, so help us help you as much as you can ;-)

hth a little,

prg

email above disabled