

USING PACLINK FOR PROVIDING EMAIL ACCOUNTS FOR EMERGENCY OFFICIALS WHAT I FIGURED OUT IN SEVERALHOURS OF TRYING.

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DISCLAIMER: There may be mistakes....

I finally got PACLINK working as one might want it for a Hurricane Shelter providing email access for county officials and the general public.

1. We can create what are called "tactical" email addresses, by using the PACLINK software, causing these email addresses to come into being on @WINLINK.ORG. An example might be:

ALACT-1@WINLINK.ORG

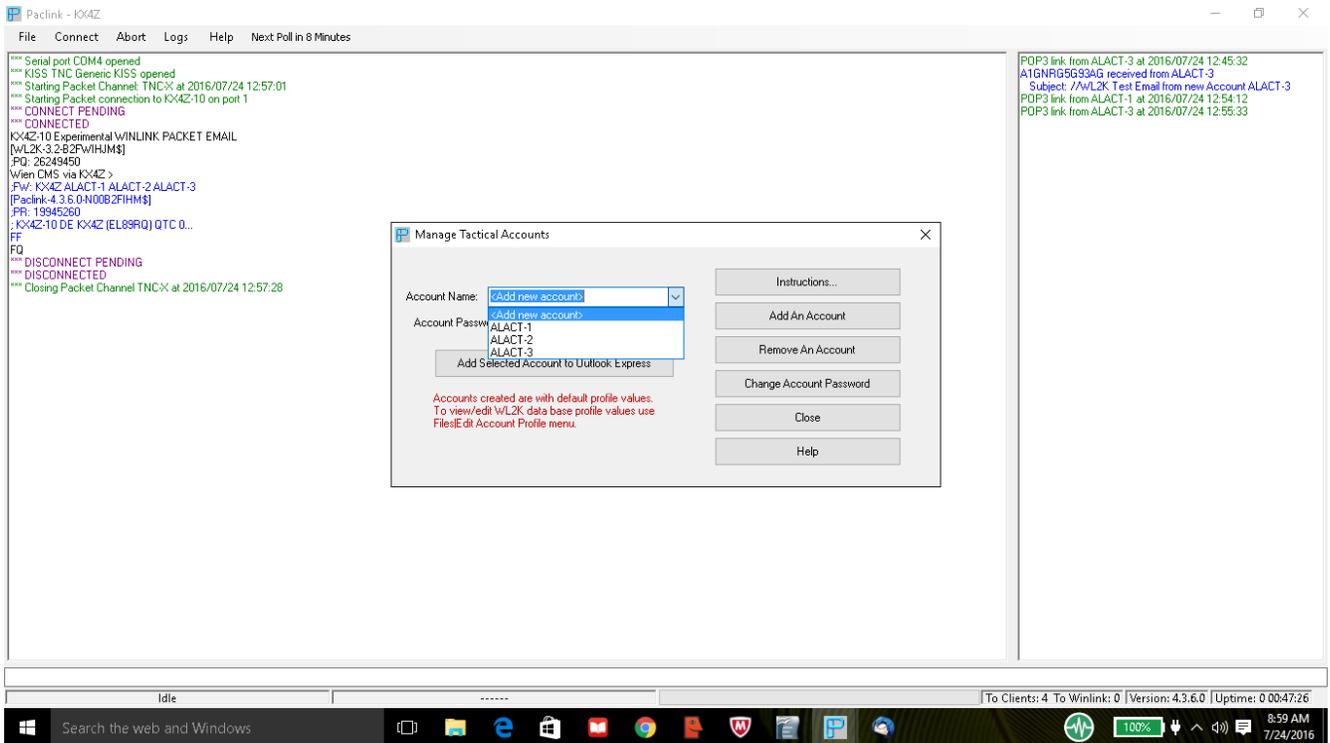
(an email that does now exist for real and I've sent it email with success, stands for "alachua county tactical #1")

2. You would probably want to create several of these. At least one for each ESF group (ALACT-2, ALACT-3 and so on), and perhaps one for a general "shelter resident" party-line type address at each occupied shelter. For example, you might want to create:

ALACHSHRES-2@WINLINK.ORG, which could be used as a general catch all ("party-line" type telephone idea) email address for all shelter residents at shelter #2 in alachua county. You would of course prominently list the NAME of the actual person associated with each individual email.

3. Email however, goes out and come in under CALL SIGN ACCOUNTS because this is amateur radio. For example, my account would be KX4Z@WINLINK.ORG. All email that I would be handling goes "under" that call sign.

4. At any given physical location (the EOC, Shelter #2, whatever), the ham radio operator associates the necessary TACTICAL emails with their callsign inside PACLINK using this dialog box:



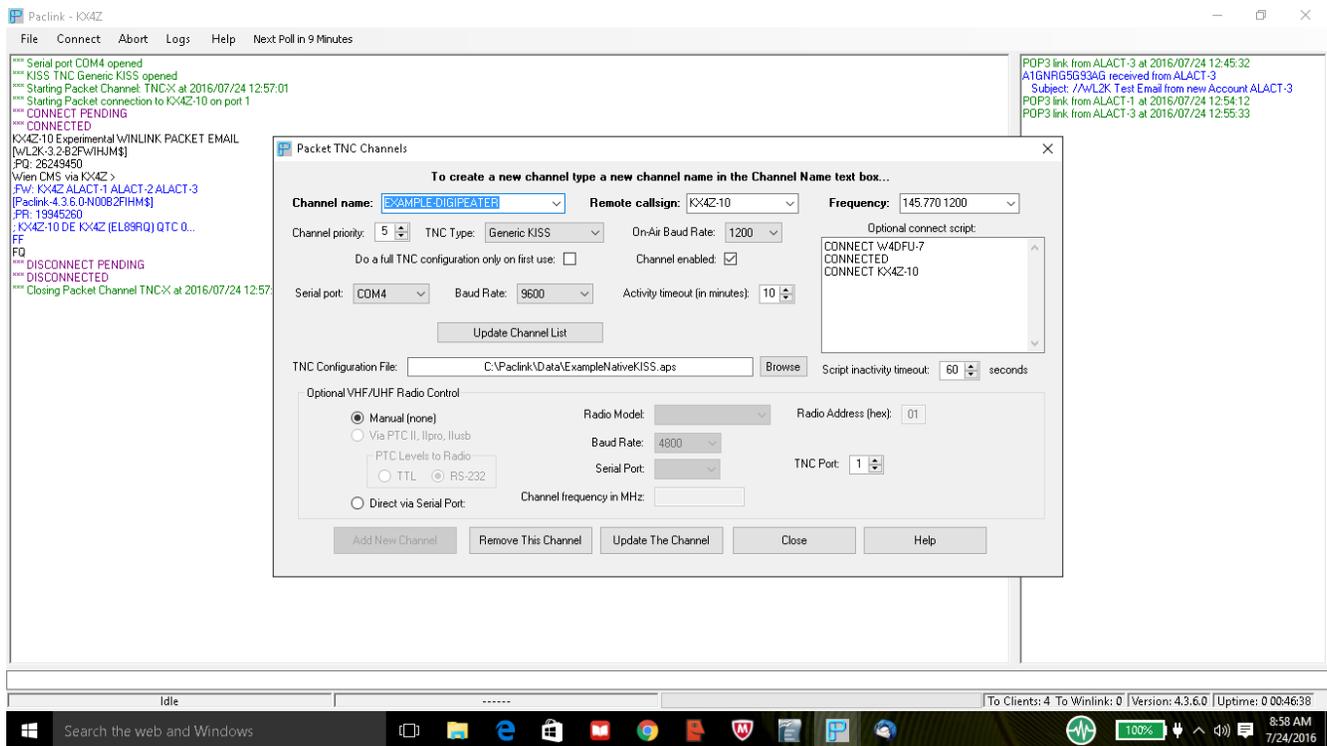
I know that is tiny print, but in the upper left you see that the radio is operating under KX4Z call sign, and in the dialog box in the center, you see that I have already associated ALACT-1 with me, and I can now type over the <Add New Account> wording with a new name, and then hit ADD NEW ACCOUNT -- and it is done.

5. PACLINK is able to use multiple communications modalities to reach WINLINK. It can use existing internet (TELNET); it can turn on a TNC and create a PACKET connection; it can even do PACTOR (which is far more expensive, but better for HF). You set up (in the drop down menus etc) each existing connection, and you assign a priority, and you also assign a polling interval. You can also force a manual connection. You can also get around the "every 15 minutes polling" and direct that the system will make a connection immediately any time it has new pending outgoing mail.

I have found the internet TELNET connection to be odd....maybe something about how my WIN10 machine's TCP/IP works....still working on that, it works, but not every time (very odd). The PACKET connection is extremely nice. Works very very well. I sit in my living room and it uses a baofeng to make the connection to upstairs.

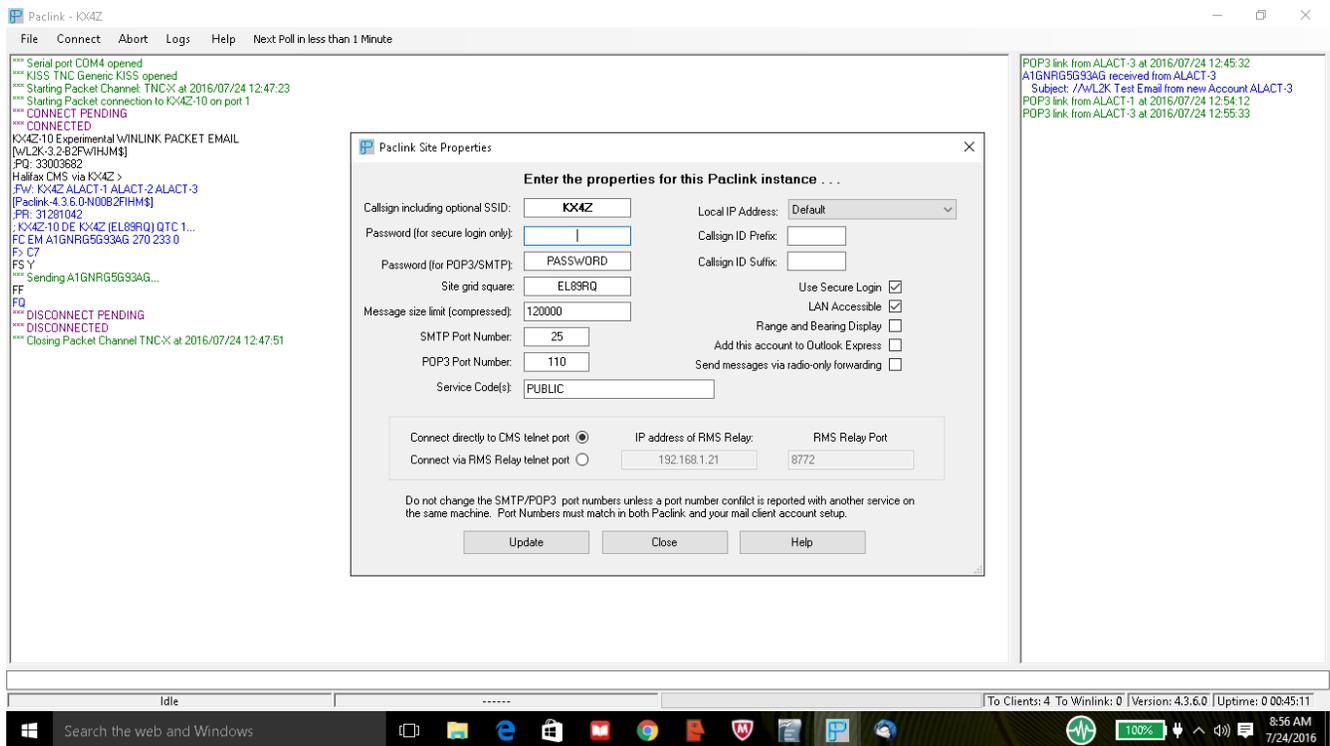
DIGIPEATERS: You guys haven't done "Plain Old Packet" much, but I am only slightly ahead.... in order to create a "channel" that includes using an intermediate digipeater, you use CONNECT statements in a SCRIPT similar to what is in the following photo of how it might work (haven't proven this year, but am going by this document from the military MARS guys:

http://www.marsregionone.org/Tech/Digital_Info/PackLink/packlink-primer.pdf



See the "CONNECT" statements in the white box? The first would command a connection to digipeater W4DFU-7; the second forces a pause until it sees "CONNECTED"; the third causes a connection to my RMS Packet gateway station KX4Z-7. (Inside RMS_EXPRESS, this is hidden below the surface; in paclink you see the nitty gritty details)

6. PACLINK then provides (unencrypted) POP3 and SMTP services, just like it was an email server at your place of business. Here is the screen where you set that up (I've removed my WINLINK password for security purposes):



If you did any information technology in your past, this is old hat. PACLINK is going to run a POP3 server to provide access to incoming email, default TCP/IP socket 110, and will provide SMTP outgoing services on default TCP/IP socket 25, of the computer it is running on. You can of course change the sockets if you have to. Here you specify the password to get into the server – [disclaimer: I am not yet sure whether you can have different passwords for each account....at the moment to simplify, I am just using PASSWORD for their passwords....will test and change later.] You can also put a limit on the SIZE of messages you will handle -- we would probably limit those to the size of faxed images at a maximum?

7. Now we get to the "last mile" of communications -- getting it out to the end-users. As you can] see, in the right hand column of the last two screen captures, PACLINK is being polled by an email program for ALACT-1 every 10 minutes, and at the beginning, it was being polled by KX4Z on an email program.

Each user can use any client email application that is able to do POP3/SMTP email transfers. I'm not a fan of MICROSOFT OUTLOOK but it should work. I downloaded MOZILLA THUNDERBIRD and found that one program handles only ONE email address/person, so I made multiple instances of the program to handle different persona's -- and it works. Each county official can run their preferred software on their own laptop, connecting to the PACLINK at the EOC via WIFI (POP3/SMTP). The ham just sits there overseeing it.

If there is a full WINLINK RMS station set up at the EOC you get more ways to do this same functionality -- RMS_RELAY has some capabilities too....but I have focused on PACLINK because it requires only Client-level authorization, which is free to all hams without restriction or obligation.

If you are at a Shelter, doing much the same thing, you run PACLINK just as you would at the EOC, and you have shelter officials with their laptops sending and receiving over WIFI [you might have to bring along a WIFI router to put up a net for everyone] and you could potentially provide a "party-line" address for shelter residents, if all other internet (e.g., cell phone email) is gone.

The gentleman I spent an hour on the phone with said to do it this way:

A. Put a computer out where they can type in email and hit SEND. This would probably be overseen by an official volunteer? Make sure they put their NAME at the top. Example:

TO: anniesue@gmail.com
FROM: ALACHSHRES-2@WINLINK.ORG

------(email text)-----

FROM: John Q. Citizen

*Hi Mom, I didn't want to ride out the hurricane in my mobile home so I'm at Alachua County Shelter #2 and you can reach me for short, important emails by return email to the address you got this from and including my NAME at the top. I'm fine and Mary and the boys are with me.
Love, John*

B. When emails come flowing back in, you might print them out, tear them off separately, and have a volunteer hand them out when the correct individual identifies him/herself at the incoming email pickup volunteer desk.

Not hard at all!

8. Doubtless by now you are wondering how in the sam hill this actually WORKS in the background at WINLINK. The "TACTICAL" emails come into being when you first send an email from them. WINLINK software observes the literal radio / internet route from which they came, and uses that to know how to get back to that actual email address. The addresses must be UNIQUE and unfortunately that is sort of random-send-collision-detect....just use close to the max of 12 characters and the chances of duplicates are minimized. Email addresses live for only a year if dormant. They remain associated with the original CALLSIGN that created them until formally released (there's a button for that). Every time you make a packet (or internet) connection back to the CMSserver there is a line sent that tells who you want to pick up email for. It looks like this:

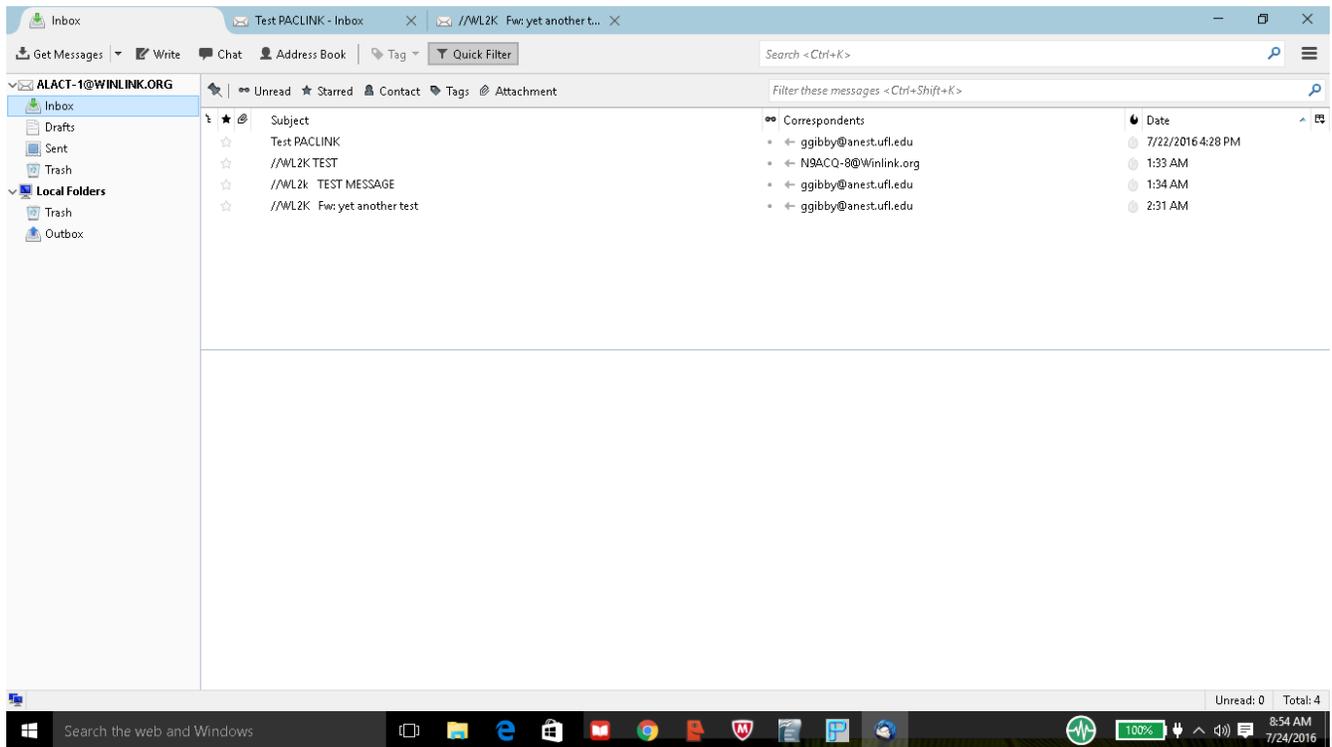
FW KX4Z ALACT-1

so they know to release to KX4Z not only his own email, but also the email for ALACT-1 etc.

It never ceases to amaze me just how much intricate stuff these WINLINK people have thought through and have ready for emergency communications. What we need is a complete manual of how

& why you would use each piece of software. They are OBVIOUSLY brilliant people! This document may assist people.

Finally, here is a picture of my THUNDERBIRD client, which connects over TCP/IP sockets to PACLINK to send and receive email. You could do this from any computer on the local area network, since this is all done over TCP/IP sockets.



This is the coolest stuff.

I had a fun, but frustrating time figuring it out.

Gordon