



Option Installation Utility for all SkyRouters

Tech Note – TN[017]
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Purpose

This TechNote describes the purpose and operation of Ctek's Option Installation utility, now resident on all SkyRouter firmware releases.

Note – This process can only be locally or over-the-air as required.

Background

Applications and specialized interface programs for Ctek's SkyRouters are made available as order options. In most cases options may be ordered and installed as part of the manufacturing process. However, customers may elect to install additional options as a part of the customers commissioning process or after the SkyRouter is deployed. Ctek's options are assigned numeric order codes to identify the option and the platform(s) for which it is appropriate. a few examples are:

Option Code	Description	Platforms
04	TCOPlus Administration package	All (comes standard on M series packaging)
05	Dual-mode GPS application - local and over-the-air interfaces to AVL/LBS applications.	All
31	3g-Cable application - Backup and load sharing for cable data connections	Z4200U, Z4400U

Note - In addition to installing Ctek pre-built options the Options Installer is available to customers to install or update their own applications or change configuration settings.

Theory of Operation

Ctek's option utility makes use of a virtual FTP target named *options* that is resident on each SkyRouter beginning with the following releases.

SkyRouter Model	Release
M4200E	ck411_ev_gre_3-01-03
M4400E	ck411_umts_gre_1-01-04
Z4200S, W4200S, B4200S	ck415_rev_b_ev_gre_3-01-03
Z4200U, W4200U, B4200U	ck415_rev_c_ev_gre_3-01-03
Z4300S, W4300S, B4300S	ck416_rev_b_gsm_gre_1-02-03
Z4300U, W4300U, B4300U	ck416_rev_c_gsm_gre_1-02-03
Z4400U, W4400U, B4400U	ck415_rev_c_umts_gre_1-01-04

The virtual target *options* is actually a program that expects to unpack a tar archive inside of a Gzip archive. The tar archive is unpacked in a temporary directory and its contents are then installed using a script named *do_update* which is contained in the tar archive. Once the *do_update* script has completed successfully all temporary files remaining are removed.

The contents of a typically tar archive for options installation and the contents of a typical *do_update* script are shown below in figures 1 and 2.

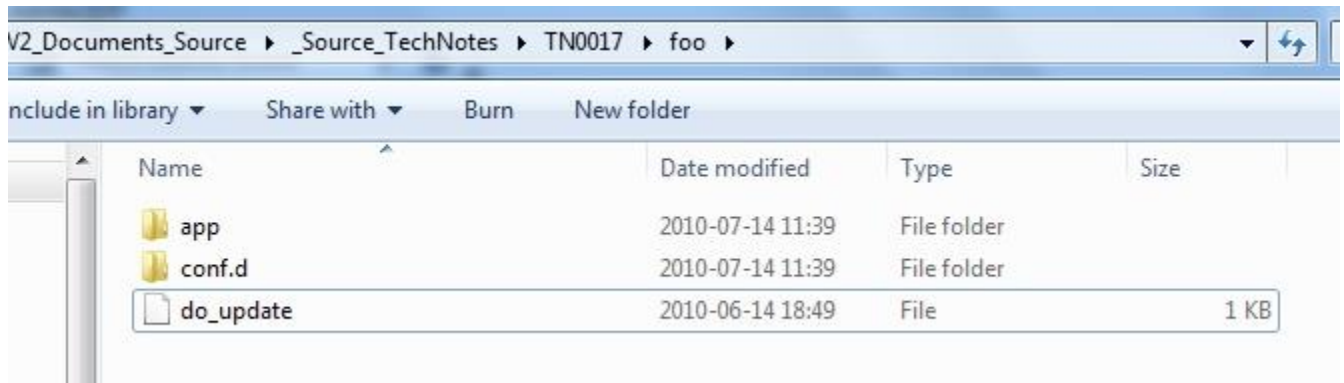


Figure 1

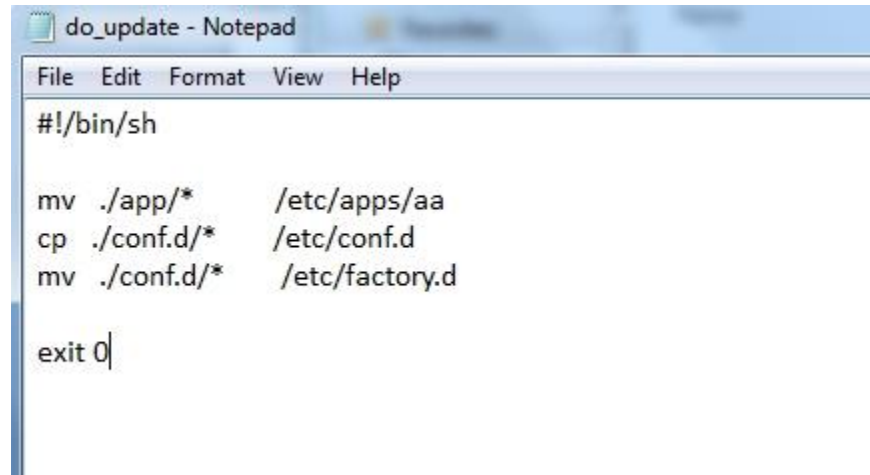


Figure 2

Using the Option Installer

To use the option installer you simply FTP the Gzip archive to *options* on the target SkyRouter. Your FTP client will report the completion status. A sample dialog is shown below.

```
[mts01@localhost 05-DUAL_MODE_GPS]$ ftp 192.168.1.10 Connected to 192.168.1.10 (192.168.1.10).
220 Ctek SkyRouter Release 3.01.03 (Jun 24 2010) ready.
Name (192.168.1.10:mts01): root
331 User name okay, need password.
Password:
230 User logged in, proceed.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> put 05-DUAL_MODE_GPS.tar.gz options
local: 05-DUAL_MODE_GPS.tar.gz remote: options
227 Entering Passive Mode (192,168,1,10,13,142) 150-Shutting down processes.
*** Ctek Option Installer Running ***
150 Opening data connection.
214-Virtual target execution.
214 Virtual target exit.
17919 bytes sent in 0.0269 secs (665.66 Kbytes/sec)
ftp> bye
221 Goodbye.
```

NOTE - To use the Option Installer on a remote SkyRouter you will first need to temporarily disable the firewall on that machine. To do this go to the Routing screen on the target machine, change the ***Block Inbound IP Traffic From Wireless Network*** setting to ***NO***, click update at the bottom of the screen and then do a restart. Be sure to restore the firewall when the option installation has completed.