Helper functions to simplify writing setup scripts that modify VenusOs functionality. The package includes automatic reinstallation of the package after a VenusOs update.

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🟩 **kwindrem** fixed: PackageManager edit menus not working   …   last week   🕒 132

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ReadMe

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New: SetupHelper includes a GUI based package manager

The SetupHelper package provides:
    a mechanism to automatically reinstall packages following a Venus OS update
    an automatic update mechanism to keep packages up to date
        from GitHub archives or USB stick
        control of the automatic download and install from the GUI
        add and remove packages from the system
        manual download, install, uninstall from the GUI


    a "blind" install of SetupHelper from SD/USB media


        backup and restore SOME settings from com.victronenergy.settings
                this includes custom logos and copying logs to removable media
                        SetupHelper
                        PackageManager
                        gui

SetupHelper is also required for my other packages
        and must be installed BEFORE running the other package setup scripts

Blind Install:

By far, the easiest way to install SetupHelper is the "blind install"
        which requires no command-line interaction.

    1) Download venus-data.tgz from the SetupHelper GitHub repo.

        Note: Mac OS and Safari are set by default to unzip packages.
                The Open "safe" files after downloading (bottom of Safair Preferences General)
                        must be disabled in order to retain the zip file.

    2) copy it to the root of a freshly formatted SD card or USB memory stick
    3) place the media in the GX device (Cerbo, CCGX, etc)
    4) reboot the GX device and allow the system to display the GUI

    if you are running Venus OS v2.90 and beyond:
        you should find the Package Manager menu at the bottom of the Settings menu
        you should remove the media at this point
            mechanisms are in place to prevent reinstallation, but removal is still a good idea

    if you are running Venus OS prior to v2.90, perform these additional steps:

    5) reboot the GX device a second time
        6) WHILE the GX device is booting, REMOVE THE MEDIA from the GX device
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                VERY IMPORTANT to prevent the next reboot from starting the process all over again
                failure to do so could disable reinstalls following a Venus OS firmware update !!!


    you should find the Package Manager menu at the bottom of the Settings menu


    venus-data.tgz is available here:
        https://github.com/kwindrem/SetupHelper/raw/main/venus-data.tgz


    CAUTION: prior to v2,90, this mechanism overwrites /data/rcS.local !!!!
        If you are using rcS.local to perform boot-time activities,
        /data/rcS.local must be recreated following this "blind" install
        Note that SetupHelper also uses /data/rcS.local for
        reinstallation following a firmware update so use caution in
        recreating rcS.local.


Another way to install SetupHelper is to use the following from the command line of the GX device:

        wget -qO - https://github.com/kwindrem/SetupHelper/archive/latest.tar.gz | tar -xzf - -C /data
        mv /data/SetupHelper-latest /data/SetupHelper
        /data/SetupHelper/setup

Once SetupHelper is installed, updates to it and other packages can be performed through the GUI
using the PackageManager menus.

CAUTION:
        Package Manager allows uninstalling SetupHelper.
        This can not be undone since the menus to control Package Manager will go away
        You would need to use the Blind Install or run /data/SetupHelper/setup again to reinstall SetupHelper

        Note that removal does not actually remove the package so other setup scripts
        will continue to function.



System Recovery:

It is highly unlikely, but some users have reported a package install leaving their system unresponsive
or with a nonfuncitonal GUI (white screen). In this case, your options depend on the platform and the current state of the
system.

First, (as always) reboot
Second, see if you can access the PackageManager menu. If so, you can remove pacakges one at a time from there.
        If you find an offeding package, post an issue to the GitHub repo for that package and include:
                Platform (Cerbo, CCGX, Raspberry PI, etc)
                Venus OS firmware version
                attach logs if you can get to them
        Remove SetupHelper last since once you do, you loose the PackageManager menus!

Third, if you have terminal or ssh access, try running the package setup scripts to uninstall packages one at a time.

Fourth, if you have GUI access again, try booting to the previous Venus OS version (in Stored backup formware)
        Then perform a fresh Online firmware update to the latest version or use the .swu update via removable media.
        These procedures are documented: https://www.victronenergy.com/media/pg/Cerbo_GX/en/gx---how-to-update-firmware.html

Fifth, perform the Blind uninstall procedure below.

Sixth, perform the Victron "restore factory default" procedure:
        https://www.victronenergy.com/media/pg/CCGX/en/factory-reset.html

        Note: this will wipe out all settings and you'll need to reconfigure the GX device from scratch.

Finally, if you are running on a Raspberry PI, you can reimage the system SD card.

        Note: this will wipe out all settings and you'll need to reconfigure the GX device from scratch.


Blind UNINSTALL:

A blind uninstall mechanism is also provided which is similar to blind install described above.
This can be used in extremely rare ases where a package install leaves the system unaccessible
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via GUI or ssh.
This mechanism is a LAST RESORT.
This will run all package setup scripts to uninstall that package from system files,
        then remove the package from /data and /data/rcS.local.

CAUTION: Do NOT run the Victron restore to factory defaults script if you have an unresponsive system
              after installing one of my packages. Doing so will remove the script that restores the file system
              to their factory settings.

              Firmware reinstall requires access to the GUI so if you still don't have a working GUI after
              the Victron restore to factory defaults, then you are pretty much out of luck.

The archive for this is named venus-data.UninstallPackages.tar.gz.

        1) Copy venus-data.UninstallPackages.tar.gz to a USB memory stick or SD card
        2) Rename the copy to venus-data.tar.gz
        3) Plug the removable media into the GX device
        4) Reboot, wait 2 minutes and reboot a second time
        5) when the system automatically reboots after the second manual one, remove the media

Description:

There are two parts to SetupHelper:
1) Package Manager, controls automatic and manual updates to packages

2) Utilities used by other packages' setup scripts.
        These resources simplify the task of writing install/uninstall scripts
        and may be of help to others writing packages of their own.

The latter is of concern only to those writing new Venus modifications
or modifying an existing setup script.
These are described in detail later in the SetupHelperDescription document.

Package Manager:

The Package Manager includes a set of menus on the GX device menu system
        that allows the user to view package versions,
        control automatic package updates
        and manually install, uninstall, add and remove packages.

        A python program runs in the background (as a service) to do the actual
                work and to interface with the menus.

        Package Manager menu:

                The first line of this menu provides status for Package Manager,
                        indicating what it is currently doing

                Automatic GitHub downloads controls if packages are automatically downloaded
                        from GitHub. This occurs if a newer version is available.
                        Modes:
                                On checks GitHub for a package that is newer than what is stored on the system
                                If multiple downloads are detected, PackageManager waits after a download has occurred before
checking another
                                        The wait time is 10 seconds for the first pass through the active packages.
                                        After one pass through all packages, the downloads spaced 10 MINUTES apart
                                Once checks GitHub for a package, then downloads are turned off
                                Off disables GitHub downloads

                        Note that when switching on automatic downloads, PackageManager first refreshes the version
information from GitHub

                Auto install packages:
                        Controls whether new versions of a package are automatically installed.
                        Some users may wish to have the system automatically download new updates,
                        but install them manually.
                        In this case, automatic GitHub downloads may be turned on and Auto install packages turned off

                        Auto install packages also influences whether packages transferred from SD/USB media
                                are automatically installed or just transferred to local storage

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Active packages:
        displays all active packages

        Version information is displayed for each package:
                Git Hub shows the version found on GitHub
                Stored shows the version stored on the GX device
                Installed shows the version actually installed and running

        Tapping on one of the entries leads to the Package editor menu

Inactive packages:
        displays all INACTIVE packages
                I.e., default packages not yet activated or manually removed
        The first entry is always "new" and allows the operator to enter package name, GitHub user and
branch/tag
                from scratch
        Additional lines (if any) are default packages (from the defaultPackageList file)
        If a package is already added to the version list, it will not appear in the Add Package list

        Tapping on one of the entries leads to the Add Package menu

Backup & Restore settings:
        saves settings to the settingsBackup file on removable SD/USB media
        restores from same
        /data/SetupHelper/settingsList is a complete list of settings saved to settingsBackup
                GuiMods
                SetupHelper
                ShutdownManager
                SOME Victron stock settings in the following sections
                        Alarms
                        CGwacs
                        DigitalInputs
                        Generators
                        Gui
                        Pump
                        Relay
                        System
                        SystemSetup
                        Vrmlogger
                Any logo files in /data/themes/overlay
                Setup script options in /data/setupOptions
        The parameters must exist to be saved
        The parameters will be created and set to the backed up value during a restore

        Note: Victron is working on a more comprehensive mechanism but is not working reliably yet
                This part of PackageManager is temporary and will be removed when the Victron functionality
is working

        SETTINGS_AUTO_RESTORE:
                An automatic settings restore will be performed when PackageManager if the file named
                        SETTINGS_AUTO_RESTORE is detected in the root of removable media

                CAUTION: LEAVING THIS FLASH DRIVE IN THE SYSTEM WILL TRIGGER A SETTINGS RESTORE WITH EVERY BOOT
                                YOU MUST REMOVE THE FLASH DRIVE AFTER AUTO RESTORR

        microSD / USB:
                is a duplicate of the menu item in VRM online portal
                it can be used to eject ALL removable media before physically removing them
                NOTE: all media is ejected, so if you are using one for VRM logging,
                        you'll need to reboot or unplug, then replug that device.

        AUTO_EJECT:
                If this flag file is found on any removable media, ALL removable media is ejected
                        after the media is scanned AND if any transferrers were performed:
                                transfer a package from the media (as an archive file) to /data
                                restore backup settings
                        this will NOT occur for
                                manual settings backup or restore

                Removable media can be corrupted if removed while the VRM logger is still writing to it
                        so the drive must be ejected to prevent corruption
                A manual eject button is included in the PackageManager menu
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This automatic eject is intended for unattended deployment and will only occur if the AUTO_EJECT file exists

Unfortunately, the eject mechanism ejects all removable media, not just a specific one.
The VRM logger automatically uses the first removable media found so there is no control over it,

AUTO_INSTALL_PACKAGES:
If the file AUTO_INSTALL_PACKAGES is found on removable media, packages will be installed
even if the Auto Install menu option is turned off. This is generally used only for system deployment (see below).

AUTO_UNINSTALL_PACKAGES:
As above, but will uninstall all packages found in /data
This is useful if you have not command line access and end up with a GUI that is unresponsive
or just to clean up a system, returning it (almost) to factory defaults
This flag file oerrides AUTO_INSTALL_PACKAGES if both are present

The system is rebooted after the uninstall all just to be sure there's nothing left behind.

Note: this uses PackageManager, so if SetupHelper isn't installed it will do nothing

AUTO_INSTALL:
If the file AUTO_INSTALL is present in a package directory, the package will be installed
as if the auto install option is set in the PackageManager menu
Version checks are still performed and DO_NOT_INSTALL is honored

ONE_TIME_INSTALL
If the file ONE_TIME_INSTALL is present in a package directory, the package is automatically installed
even if automatic installs are diabled and the DO_NOT_INSTALL flag is set
This ONE_TIME_INSTALL is removed when the install is performed
to prevent repeated installs
Packages may be deployed with this flag set to insure it is installed
when a new version is transferred from removable media or downloaded from GitHub

INITIALZE_PACKAGE_MANAGER and menu item:
If present, the PackageManager's persistent storage (dbus Settings parameters) are initialized
and PackageManager restarted
On restart, PackageManager will rebuild the dbus Settings from packages found in /data
Only custom Git Hub user and branch information is lost.

Package editor:
This menu facilitates:
manual install, uninstall, package add and package remove
changing GitHub access information for each package

Normally, you would want to download the latest released version
but you may also wish to try out a beta version or revert to a previous one.
Once the GitHub branch is changed, PackageManager will update the GitHub version
and, if enabled, download this alternate version.

Remove Package
Packages that are of no interest to you may be removed from Package Manager.
Removed packages will no longer appear in the version list or be accessible from the Package Editor menu.

But you can add the package back in manually.

Add package menu:
Allows the package name, GitHub user and GitHub branch or tag to be entered.

Pressing Proceed initiates the package add.
The package will be added to the package list (and appear in the Package versions menu)
only IF the name is unique

Pressing Cancel returns to the default package list

All three fields must be set appropriately or you'll see -- for the GitHub version

Package Manager does not allow removing packages unless they are uninstalled first.

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                Package Manager DOES permit uninstalling SetupHelper,
                        however this will remove the Package Manager itself.
                        Once removed, the Blind Install mechanism will be needed again !!

  USB/SD updates:

          When the GX device is not connected to the internet, a USB flash drive or microSD card provides an install/upgrade
  path.

          To use the USB update process
                  Navigate to the GitHub, repo, click on tags and select the appropriate branch or specific version tag.
                  Choose the .tar.gz download link.
                  (Do not download from the Code tab or download the .zip file. These won't work.)
                  Copy the archive file to a USB memory stick or microSD card.
                  Do NOT unpack the archive
                  Repeat this for all packages you wish to install.
                  (These can all be placed on the same media along with the SetupHelper venus-data.tgz file)
                  Insert the stick in the GX device.
                  If SetupHelper has not yet been installed, follow the Blind Install process above.
                  Once Package Manager is running, it will transfer and unpack the archive files
                          and update the package list with the new packages.
                  If Auto install packages is turned on, the packages will then be installed

                  NOTE: no version checks are made for packages found on SD/USB media!
                          Package Manager is quite content to transfer and install an older version!
                          So make sure you have the latest version especially if your GX device does not have internet access.



  System automatic configuration and package installation:
          It is possible to use SetupHelper to set up a new system based on a template saved from a working system.
          Setup the working system the way you want the new system to behave including custom icons,
          then perform a Settings backup.
          Remove the flash drive from the GX device and plug into a computer that has internet access.
          Copy venus-data.tgz from the SetupHelper GitHub repo to the same flash drive.
          If you wish packages to also be installed, copy the package -latest.tgz file from those repos as well.
          Create SETTINGS_AUTO_RESTORE on the flash drive (contents don't matter - file may be empty).
          Create AUTO_INSTALL_PACKAGES on the flash drive as well.
          Place the flash drive into the GX device to be configured and reboot (once for v2.90 or twice for prior versions).
          REMOVE THE FLASH DRIVE after you have verified that all packages have been installed (check Active packages in
  PackageManager).


  If you are interested in the inner workings of Setup Manager and Package Manager or wish to create a package that can be
  managed by PackageManager, the document "Package development guidelines"  contains assitional information. Feel free to
  contact me through the issues part of SetupHelper on GitHub.
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Releases 29

🏷 **current** (Latest)
  last week

+ 28 releases

Packages

No packages published

Contributors 2

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Languages

● **Python** 66.2%   ● **Shell** 19.3%   ● **QML** 14.5%