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| How to create and use a Live CD  **From FedoraProject**  Jump to: [navigation](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#column-one), [search](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#searchInput)  [Language.png](http://fedoraproject.org/wiki/FedoraProject:Translating)  [**In other languages:**](http://fedoraproject.org/wiki/FedoraProject:Translating) **English (en)** [Русский (ru)](https://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD/ru) [[edit](https://fedoraproject.org/w/index.php?title=Template:Lang/How_to_create_and_use_a_Live_CD&action=edit)]  This page explains how to make a custom-content Live CD or DVD on Fedora-based systems including derived distributions such as RHEL, CentOS and others.  If you simply want to burn a pre-made ISO to a disc, visit <http://fedoraproject.org/en/get-fedora> to download a LiveCD or LiveDVD, then see the [install guide](http://docs.fedoraproject.org/install-guide/) or [burning how-to](http://docs.fedoraproject.org/readme-burning-isos/) for further instructions.  See the [project wiki](http://fedoraproject.org/wiki/FedoraLiveCD) for more details. Discussion of this project takes places at <http://admin.fedoraproject.org/mailman/listinfo/livecd>.  This project and its source files are licensed under the GPLv2 license. See the file COPYING for details.   |  | | --- | | **Contents**  [[hide](javascript:toggleToc())]   * [1 Creating a Live image](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Creating_a_Live_image)   + [1.1 How the livecd-creator Works](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#How_the_livecd-creator_Works)   + [1.2 Live image Configuration Files](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Live_image_Configuration_Files)   + [1.3 Set SELinux to permissive mode](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Set_SELinux_to_permissive_mode)   + [1.4 Making a 32-bit spin ISO on a 64-bit machine](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Making_a_32-bit_spin_ISO_on_a_64-bit_machine)   + [1.5 Example: Spinning the Fedora Desktop Live CD](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Example:_Spinning_the_Fedora_Desktop_Live_CD)   + [1.6 Example: A Barebones Live CD](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Example:_A_Barebones_Live_CD)   + [1.7 Testing your Live CD using KVM or qemu](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Testing_your_Live_CD_using_KVM_or_qemu) * [2 Live image Installs](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Live_image_Installs) * [3 Live Image Media Verification](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Live_Image_Media_Verification) * [4 Using Live Images from USB Media](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Using_Live_Images_from_USB_Media) * [5 Other Resources](http://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD#Other_Resources) |   Creating a Live image  To create a live image, the **livecd-creator** tool is used. Super user privileges are needed. The tool is more or less self-documenting, use the *--help* option to see options.  The **livecd-creator** tool is part of the livecd-tools package. If it is not installed on your system, add it with:  su -c 'yum install livecd-tools spin-kickstarts'  If you are interested in localized live cd files, install also **l10n-kickstarts**.  **How the livecd-creator Works**  In a nutshell, the **livecd-creator** program   * Sets up a file for the *ext3* file system that will contain all the data comprising the live CD * Loopback mounts that file into the file system so there is an installation root * Bind mounts certain kernel file systems (/dev, /dev/pts, /proc, /sys, /selinux) inside the installation root * Uses a configuration file to define the requested packages and default configuration options. The format of this file is the same as is used for installing a system via *kickstart*. * Installs, using *yum*, the requested packages into the installation using the given repositories in the kickstart file * Optionally runs scripts as specified by the live CD configuration file. * Relabels the entire installation root (for SELinux) * Creates a live CD specific *initramfs* that matches the installed kernel * Unmounts the kernel file systems mounted inside the installation root * Unmounts the installation root * Creates a *squashfs* file system containing only the default *ext3/4* file (compression) * Configures the boot loader * Creates an iso9660 bootable CD/DVD   **Live image Configuration Files**  The configuration of the live image is defined by a file that uses the same format as installing a system via *kickstart*. They can include some basic system configuration items, the package manifest and a script to be run at the end of the build process.  For the Fedora project, the two most important live image configurations files are   * [**fedora-live-minimization.ks**](https://fedorahosted.org/spin-kickstarts/browser/fedora-live-minimization.ks) : The base live image system (included in the 'livecd-tools' package) * [**fedora-live-desktop.ks**](https://fedorahosted.org/spin-kickstarts/browser/fedora-live-desktop.ks) : Complete desktop with applications and input/output support for all supported locales in Fedora (this one is part of the 'spin-kickstarts' package)   kickstart files for other spins (e.g. Fedora Electronics Lab) can be found in */usr/share/spin-kickstarts/* after installing the 'spin-kickstarts' package  **Set SELinux to permissive mode**  SELinux should be in permissive mode for livecd-creator to work. Run the following as root user first before attempting to create a live cd or dvd.  setenforce 0  **Making a 32-bit spin ISO on a 64-bit machine**  If you have an x86\_64 machine you're building on but you want a 32-bit happy iso image, add the following before your livecd-creator command:  setarch i686 livecd-creator [...]  **Example: Spinning the Fedora Desktop Live CD**  Note that because of the way livecd-creator works, it is not possible to choose a different set of packages or a different filesystem during installation. Assuming that you use the **fedora-live-desktop.ks** configuration file, then the following command:  livecd-creator \  --config=/usr/share/doc/livecd-tools-<version>/livecd-fedora-desktop.ks \  --fslabel=Fedora-LiveCD --cache=/var/cache/live  or  livecd-creator \  --config=/usr/share/spin-kickstarts/fedora-livecd-desktop.ks \  --fslabel=Fedora-LiveCD --cache=/var/cache/live  will create a live CD called "Fedora-LiveCD".  The name given by *--fs-label* is used:   * as a file system label on the ext3 and iso9660 file systems (As such, it's visible on the desktop as the CD name) * in the *isolinux* boot loader.   If you have the repositories available locally and don't want to wait for the download of packages, just substitute the URLs listed in the configuration file to point to your local repositories.  [Idea.png](http://fedoraproject.org/wiki/File:Idea.png)  **You can use setarch command to create a x86 live cd/dvd on a x86\_64 system. Ex: setarch i386 livecd-creator <..> .**  **Example: A Barebones Live CD**  The command  livecd-creator \  --config=/usr/share/doc/livecd-tools-<version>/livecd-fedora-minimal.ks --cache=/var/cache/live  will create a live CD that will boot to a login prompt.  [Idea.png](http://fedoraproject.org/wiki/File:Idea.png)  **Barebones Live CD does not support login capability.**  Since no configuration is done, the user will not be able to login to the system as the root password is not set/cleared.  **Testing your Live CD using KVM or qemu**  As root:  qemu-kvm -m 512 -cdrom filename.iso  If you do not have KVM support, you can use qemu instead  qemu -m 512 --cdrom filename.iso  Replace **filename.iso** with the name of your created Live CD image.  [Idea.png](http://fedoraproject.org/wiki/File:Idea.png)  Be sure to **"yum install kvm qemu"** as root for releases before Fedora 11. Fedora 11 has merged kvm and qemu into a single package. Just installing qemu package is enough.  Live image Installs  As of Fedora 7, anaconda has support for doing an installation from a live image. To use this, double click on the *Install to Hard Drive* item on the desktop or run  /usr/bin/liveinst  if you don't have such an icon.  Live Image Media Verification  The live image can incorporate functionality to verify itself. To do so, you need to have **isomd5sum** installed both on the system used for creating the image and installed into the image. This is so that the **implantisomd5** and **checkisomd5** utilities can be used. These utilities take advantage of embedding an md5sum into the application area of the iso9660 image. This then gets verified before mounting the real root filesystem.  Using Live Images from USB Media  USB sticks are becoming increasingly prevalent and are a nice way to use live images. You can take a live CD or DVD iso image and transform it so that it can be used on a USB stick. To do so, use the [**livecd-iso-to-disk**](http://fedoraproject.org/wiki/Livecd-iso-to-disk) script:  /usr/bin/livecd-iso-to-disk /path/to/live.iso /dev/sdb1  Replace /dev/sdb1 with the (unmounted) partition where you wish to put the live image. This is not a destructive process; any data you currently have on your USB stick will be preserved.  Additional information available at [How to create and use Live USB](http://fedoraproject.org/wiki/How_to_create_and_use_Live_USB).  Other Resources   * A [Fedora Classroom](http://fedoraproject.org/wiki/Classroom) class covering [creating Fedora remixes](http://fedoraproject.org/wiki/Classroom/Creating_Fedora_Remix). * If you are distributing your spin you need to be concerned about [trademark usage and GPL responsibilities](http://fedoraproject.org/wiki/JeroenVanMeeuwen/Revisor/FedoraRebrandRemixGuidelines).   Retrieved from "<https://fedoraproject.org/wiki/How_to_create_and_use_a_Live_CD>"  [Categories](http://fedoraproject.org/wiki/Special:Categories): [Spins](http://fedoraproject.org/wiki/Category:Spins) | [LiveMedia](http://fedoraproject.org/wiki/Category:LiveMedia) |