

From GIT to a custom OS image in a few click

OS image made easy

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Goals

- Create ISO live image to ease testing
- Automate image creation as much as possible
- No need to wait for various software release to create an image
- No more “I installed your devel version and it broke my system”
- Help discover bugs when applications are run in a clean environment before release, not only in developer environment

Tools used

- Open Build Service (OBS)
- SUSE Studio (optional)
- Kiwi
- A lot of disk space ;)

Open Build Service

Open Build Service

(previously known as openSUSE Build Service)

- Allow to create packages for many distributions at the same time:
 - RPM based distros (openSUSE, Fedora, CentOS, MeeGo, Mdv)
 - DEB based distros (Debian, Ubuntu)
 - Soon, other targets (ArchLinux)
- Automated, repeatable and consistent :
 - Clean chroot
 - Handle build dependencies and autorebuild if needed
 - Take care of publishing consistent repositories



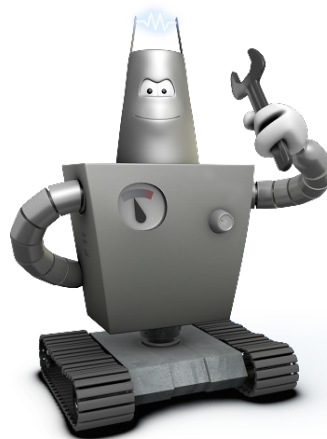
Open Build Service (cont.)

- Generate packages or full OS images / appliances
- Source services can
 - pull data from SCM (SVN / GIT / BZR / HG) and use it like a regular tarball
 - Download / verify files at build time
- Can be controlled either by CLI or WebUI (or even REST)

SUSE Studio

SUSE Studio

- Web interface to create appliances
- Can pull packages from OBS projects
- Create an appliance in less than 10 mouse clicks
- Testdrive appliance before downloading them
- Can export appliance configuration to be use with Kiwi
- You can test it on susestudio.com



KIWI

KIWI

- Create full OS images, based on packages
- End result :
 - Appliances (name your VM :)
 - Live CD / DVD / USB images (can be hybrid)
 - Disk / USB preload images
 - PXE images
- Image configuration:
 - XML file (package list, image settings)
 - Optional Shell script run after installing packages
 - Tarball with additional files

KIWI (cont.)

- To create initial image configuration:
 - Your favorite text editor to write XML (templates available)
 - SUSE Studio and export the appliance as KIWI format
 - Install a system, customize it and run kiwi on it to generate KIWI files based on system configuration
- Run kiwi:
 - On a local system (usually for test purpose)
 - From OBS :
 - Put kiwi configuration in a project
 - Create an image repository
 - Wait for images to be generated
 - Automatically regenerated when packages are updated



Example

- GNOME 3 Live image :
 - 14 images created in 4 months during GNOME 3.0 development
 - Download stats:
 - On GNOME 3 release day : 4526
 - April (after release): 141378
 - May: 42997



References

- Open Build Service:
 - <http://openbuildservice.org/>
 - openSUSE instance : <http://build.opensuse.org/>
 - Documentation portal :
http://en.opensuse.org/Portal:Build_Service
- SUSE Studio:
 - <http://susestudio.com/>
- KIWI :
 - <http://kiwi.berlios.de/>
 - Documentation: <http://isny.homelinux.com/data/kiwi.html>
 - Tutorial : <http://en.opensuse.org/Portal:KIWI>



Now, it is your turn to build
your own custom distro

Questions ?

Thank you.







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