From GIT to a custom OS image in a few click

OS image made easy

Frédéric Crozat
Senior Software Engineer
SUSE – fcrozat@suse.com

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

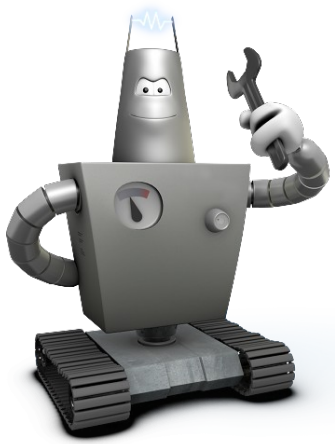
Open Build Service (cont.)

- 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.


suse®

Corporate Headquarters
Maxfeldstrasse 5
90409 Nuremberg
Germany

+49 911 740 53 0 (Worldwide)
+www.suse.com

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