

21st September 2011
Cologne – Germany
Bacula Conference

SUSE STUDIO

How to create a Bacula appliance in terms of minutes

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openSUSE





About me

Bruno Friedmann (tigerfoot)

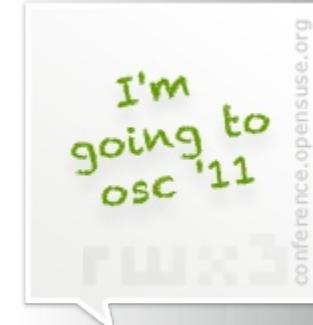
bruno.friedmann@opensuse.org

openSUSE member & Ambassador

FOSS user since 1998

SuSE user since 2001

Bacula since vers 1.36



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Sleepy?





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SUSE Studio builds:

-  Your software and everything it needs, in one appliance
-  Demo CDs, perfect for tradeshows and hand-outs
-  All sorts of things you can dream up!

-  A custom distro, with your own software and branding
-  Virtual machines, for the data center and the desktop



SUSE Appliance Toolkit

Take control of appliance building! Check out the [SUSE Appliance Toolkit](#), featuring [SUSE Studio Onsite](#).



The Dister Awards

Recent press mentions & awards



"A cool way to get the Linux configuration you want"



Jos'Smeegol2



Disk Image

Based on: openSUSE 11.3
Platform: 32-bit

Used space: **1.66 GB**
Download size: **430 MB**

3 patterns selected
46 packages selected
724 total packages

Software sources

[openSUSE 11.3 OSS](#), [openSUSE 11.3 Updates](#), [Packman 11.3](#), [Meego:Netbook 11.3](#)

[Add repositories...](#) [Upload RPMs...](#)

Selected software

Patterns: **base**, **Goblin**, **x11**

Packages: **a52dec**, **bootsplash-branding-openSUSE**, **ConsoleKit-x11**, **dbus-1-x11**,
glib2-branding-openSUSE, **gstreamer-0_10-ffmpeg**, **gstreamer-0_10-fluendo-mpegdemux**,
gstreamer-0_10-plugin-gnomevfs, **gstreamer-0_10-plugins-bad**, **gstreamer-0_10-plugins-good-extra**,
gstreamer-0_10-plugins-ugly, **icewm**, **kernel-default**, **less**, **libdvdplay0**, **libdvdread3**,
libxine1, **libxine1-codecs**, **mdadm**, **NetworkManager**, **recordmydesktop**, **SuSEfirewall2**,
syslog-ng, **vim**, **vlc-gnome**, **x11-tools**, **x264**, **xine-browser-plugin**, **xine-ui**,
xorg-x11-driver-input, **xorg-x11-driver-video**, **xorg-x11-fonts**, **xorg-x11-server**, **yast2**,
yast2-control-center, **yast2-fingerprint-reader**, **yast2-firewall**, **yast2-firstboot**,
yast2-live-installer, **yast2-ncurses**, **yast2-power-management**, **yast2-printer**, **yast2-scanner**,
yast2-sound, **yast2-sudo**, **zypper**

[Quick add...](#)

Search for software

Show: [All repositories](#)

Your appliance



To be installed (724)



Selected (49)



Banned (0)



Recommended (358)



All available software



Send feedback

Tim's JeOS Demo

Disk Image

Based on: openSUSE 11.3

Platform: 32-bit

Used space: 350 MB

Download size: 130 MB

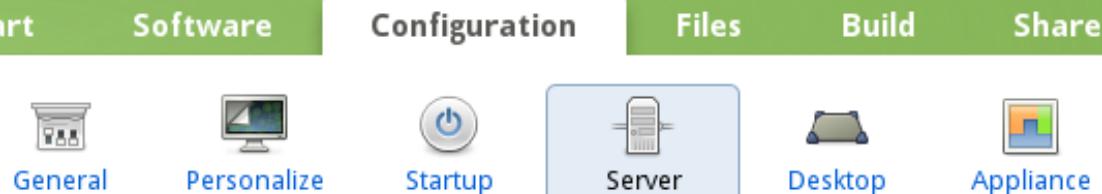
0 patterns selected

28 packages selected

147 total packages

Messages

Error: MySQL database configuration has been enabled, but MySQL is not installed.

[Add mysql-community-server](#)

Database configuration

 Set up PostgreSQL Set up MySQL

Step 1: Upload MySQL database dump file (.bz2 only)

First, generate a dump of the database schema and data from your desired databases/tables. One way is to use the 'mysqldump' tool which is included with MySQL. For example, to generate a dump of the database 'mydb' (including both schema and data), use the following command:

```
mysqldump --databases mydb -u root -p > mydb.sql
```

This generates the database dump into the 'mydb.sql' file. Because this file can be rather large, please bzip it first using the following command:

```
bzip2 mydb.sql
```

Then upload the resulting 'mydb.sql.bz2' using the button below.

[Upload MySQL dump...](#)

Step 2: Configure MySQL users and permissions

Add MySQL databases users and specify the databases that they have access to here. Separate the list of databases by commas (i.e. mydb1, mydb2).



Take notes



Tim's JeOS Demo



Disk Image

Based on: openSUSE 11.3

Platform: 32-bit

Used space: **390 MB**

Download size: **140 MB**

0 patterns selected

29 packages selected

151 total packages

Software changes

Added mysql-community-server

[Undo](#)

Added 4 package, totaling
31.6 MB

[View details...](#)



Disk and memory

OVF, VMware, and Xen

Memory: MB

EC2, OVF, VMware, and Xen

Disk size: GB

Note: The EC2 disk size is automatically capped at 10GB for it to work with Amazon's uploading tool.

Disk image

Note: When first launched, a disk image will expand its filesystem to fill available space.

Swap partition: MB

All formats

Enable extended memory (PAE), to access more than 4GB

Logical Volume Manager

Note: Logical Volume Manager (LVM) applies to the *disk image* and *VMWare* formats only.

Configure LVM





Send feedback

Tim's JeOS Demo



Disk Image

Based on: openSUSE 11.3

Platform: 32-bit

Used space: **390 MB**Download size: **140 MB****0** patterns selected**29** packages selected**151** total packagesVersion **0.0.2**Default format: **USB stick / hard disk image** ▾

Build

Additional formats:

- Live CD/DVD (.iso)
- VMware / VirtualBox / KVM (.vmdk)
- Amazon EC2 image
- OVF virtual machine (.ovf)
- Xen guest
- Preload ISO (.iso)

[Read more about formats...](#)[Configuration...](#)Version **0.0.1**

Disk Image



Creating boot image

1:04

[Configuration...](#)

Clone

Builds older than seven days may be deleted to free up space on our servers. But don't worry, you can rebuild them at any time.

[View MD5 checksums](#), for verification that your appliance's download was successful.

[Export your appliance's Kiwi configuration](#), for building your appliance locally. (For advanced users only)



Take notes

Information shown on the testdrive console and keystrokes sent to testdrive are not encrypted. For secure access to your testdrive, we suggest using SSH. X

Ctrl-Alt-F1

Ctrl-Alt-F2

Ctrl-Alt-F3

Ctrl-Alt-F7

Alt-F1

Alt-F2

Ctrl-Alt-Del

Ctrl-Alt-Back

Keyboard layout:

English (US) ▾



SUSEStudio.com

```
|           |
+-----+
Starting SSH daemon                                done
Initializing random number generator                done
Starting rpcbind                                    done
Setting up (remotefs) network interfaces:          done
Setting up service (remotefs) network . . . . .     done
Starting service MySQL                               done
Starting mail service (Postfix)                     done
Starting CRON daemon                             done
Master Resource Control: runlevel 3 has been      reached
```

Welcome to openSUSE 11.3 "Teal" - Kernel 2.6.34.7-0.7-default (tty1).

```
linux-3rgb login: root
Password:
Have a lot of fun...
-bash: warning: setlocale: LC_MESSAGES: cannot change locale (en_US.UTF-8): No such file or directory
-bash: warning: setlocale: LC_CTYPE: cannot change locale (en_US.UTF-8): No such file or directory
-bash: warning: setlocale: LC_COLLATE: cannot change locale (en_US.UTF-8): No such file or directory
-bash: warning: setlocale: LC_TIME: cannot change locale (en_US.UTF-8): No such file or directory
-bash: warning: setlocale: LC_NUMERIC: cannot change locale (en_US.UTF-8): No such file or directory
-bash: warning: setlocale: LC_CTYPE: cannot change locale (en_US.UTF-8)
linux-3rgb:~ # echo "Welcome to Tim's openSUSE 11.3 JeOS Demo" > /etc/motd
linux-3rgb:~ # less /etc/motd
-bash: less: command not found
linux-3rgb:~ # _
```

You

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own geeko star!**

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Questions and Answers

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opensuse.org

planet.opensuse.org

opensuse.org/Portal:How_to_participate

opensuse.org/Junior_jobs

features.opensuse.org

build.opensuse.org

susestudio.com

#opensuse-project

openSUSE[®]



Thanks / Credits

Amazing openSUSE community!
fantastic Bacula community!
dassit organization

Photos : Kouistas Koudaras,
sleepy kitty from <http://www.flickr.com/photos/pasotraspaso/>

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SUSE STUDIO

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21st September 2011
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openSUSE



A small and quick presentation about SUSE Studio and Bacula



Bruno Friedmann (irc:tigerfoot)

openSUSE member & Ambassador, Marketing & QA group

I'm a long term supporter of FOSS & openSUSE. Starting using the SuSE distribution in 2001. Since 2004, my company Ioda-Net Sàrl has been using openSUSE for servers and desktops.

In my system administrator / IT consultant day live, I mainly installs & maintains IT server's infrastructure in enterprises around. From firewalls, files & printers sharing, to more specialized servers (backups with Bacula, virtual machines, geo-mapping portals etc)

My distribution is openSUSE, my desktop is KDE, and I use Bacula for my backups etc.

AFUL's member (french association promoting Free Software),

AFUP (French PhP user's association)

FSFE fellowship,

For a long time my contributions have been mainly bugs reporting about used products (openSUSE, Bacula, KDE), until 2009, when boards members ask me to become an official openSUSE member. I applied and was accepted :-)

I do my best to be present at main event, spreading the openSUSE word like in recent frOSCamp in Zürich (2010), FOSDEM in Brussels, or SCALE in Los-Angeles (2011), openSUSE conference(Nüremberg, Bacula Konferenz (Köln) I was also co-author of the first virtual party on SecondLife for the 11.4 release

You can find me in different channels on irc, and mailing-list



For the lazy among us:
how to click together a completely customized Linux
distribution with Bacula in 5 minutes!

The screenshot shows the SUSE Studio website. At the top, there's a green header bar with the "suse studio" logo, a "Help" link, and a "Create account/Sign in" button. A banner at the top right says "We're Hiring!". Below the header is a large image of a friendly silver robot holding a tray with two small icons: a red USB stick and a yellow CD/DVD. To the right of the robot, the text "Custom Linux, fast & simple" is displayed, followed by a brief description: "Build an appliance — or your own custom Linux distro — with a few mouse clicks. Customize it to your heart's content, and share it with the world!" A "Watch a screencast" button is located below this text. On the left side, under the heading "SUSE Studio builds:", there are five items with icons: "Your software and everything it needs, in one appliance" (a folder icon), "A custom distro, with your own software and branding" (a computer monitor icon), "Demo CDs, perfect for tradeshows and hand-outs" (a CD icon), "Virtual machines, for the data center and the desktop" (a server and monitor icon), and "All sorts of things you can dream up!" (a cloud icon). To the right, there's a section for the "SUSE Appliance Toolkit" featuring a green toolkit icon with a "1.1 OUT NOW" badge. Below this, text encourages users to "Take control of appliance building! Check out the [SUSE Appliance Toolkit](#), featuring [SUSE Studio Onsite](#)." At the bottom left, there's a "The Distro Awards" section with a small image of two cartoon characters. On the right, there's a "Recent press mentions & awards" section with a "2010 SIA //CODiE//" badge and a quote: "A cool way to get the Linux configuration you want".

The tool: SUSE Studio.
Free to use on SUSEStudio.com!

Go there, log in via openID, Google or create an account.

It works simple:
you choose to create a new appliance and give it a name.

Why not open : permit partners to publish non-free
appliances. Check susegallery.com for example

Private instances can use non openSUSE/SUSE OS

The screenshot shows the SUSE Studio web interface. At the top, there's a green header bar with the SUSE Studio logo, navigation links for Start, Software, Configuration, Files, Build, and Share, and user information for Jos Poortvliet. Below the header, the main content area is titled "Software sources". It lists "openSUSE 11.3 OSS", "openSUSE 11.3 Updates", "Packman 11.3", and "Meego:Netbook 11.3". There are buttons for "Add repositories..." and "Upload RPMs...". A section titled "Selected software" shows a list of packages selected: base, Goblin, x11, a52dec, bootsplash-branding-openSUSE, ConsoleKit-x11, dbus-1-x11, glib2-branding-openSUSE, gstreamer-0.10-ffmpeg, gstreamer-0.10-fluendo-mpegdemux, gstreamer-0.10-plugin-gnomevfs, gstreamer-0.10-plugins-bad, gstreamer-0.10-plugins-good-extra, gstreamer-0.10-plugins-ugly, icewm, kernel-default, less, libdvdplay0, libdvdread3, libxine1, libxine1-codecs, mdadm, NetworkManager, recordmydesktop, SuSEfirewall2, syslog-ng, vim, vlc-gnome, x11-tools, x264, xine-browser-plugin, xine-ui, xorg-x11-driver-input, xorg-x11-driver-video, xorg-x11-fonts, xorg-x11-server, yast2, yast2-control-center, yast2-fingerprint-reader, yast2-firewall, yast2-firstboot, yast2-live-installer, yast2-ncurses, yast2-power-management, yast2-printer, yast2-scanner, yast2-sound, yast2-sudo, zypper. Below this is a "Quick add..." button. The next section, "Search for software", contains a search bar with placeholder "Search packages & patterns" and a dropdown menu set to "All repositories". Under "Your appliance", there are four categories: "To be installed" (724), "Selected" (49), "Banned" (0), and "Recommended" (358). At the bottom left is a "Take notes" button.

Choose your OS (SLES or openSUSE based) and architecture x86/x64

pick a base template : just enough OS(jeOS), only X, minimal GNOME, full KDE, File/Print server etc.

Choose your own custom package selection from the 30.000 repositories on build.opensuse.org (or upload your own packages)

The screenshot shows the SUSE Studio web interface. At the top, there's a green header bar with the SUSE studio logo, navigation links like 'Start', 'Software', 'Configuration' (which is selected), 'Files', 'Build', and 'Share', and user information ('Tim Serong'). Below the header are several tabs: 'General', 'Personalize', 'Startup', 'Server' (selected), 'Desktop', 'Appliance', and 'Scripts'. On the left, there's a sidebar with a 'Send feedback' link, a preview of a 'Tim's JeOS Demo' image (a green square with a white icon), and sections for 'Disk Image' (based on openSUSE 11.3, 32-bit, 350 MB used space, 130 MB download size), 'Patterns selected' (0), 'Packages selected' (28), and 'Total packages' (147). A 'Messages' section contains an error message: 'Error: MySQL database configuration has been enabled, but MySQL is not installed.' It also has a link to 'Add mysql-community-server'. At the bottom of the sidebar is a 'Take notes' button. The main content area is titled 'Database configuration' and contains two options: 'Set up PostgreSQL' (unchecked) and 'Set up MySQL' (checked). A green note says 'Step 1: Upload MySQL database dump file (.bz2 only)'. It explains how to generate a dump using mysqldump and compress it with bz1p2. It also says to upload the resulting file using the 'Upload MySQL dump...' button. Another green note says 'Step 2: Configure MySQL users and permissions' and asks to add MySQL databases and specify users and databases.

Choose your own custom artwork, configuration, scripts or upload overlay files.

Anything can be changed!

Studio takes care of almost everything: if you configure MySQL but forget to add it, it will warn and help you.

Adding a package, it resolve automatically all dependencies. And warn you in case of conflict.

The screenshot shows the SUSE Studio Configuration interface. At the top, there are tabs for Start, Software, Configuration, Files, Build, and Share. The Configuration tab is selected. Below the tabs are icons for General, Personalize, Startup, Server, Desktop, Appliance (which is selected and highlighted in blue), and Scripts.

Disk and memory

OVF, VMware, and Xen
Memory: 512 MB

EC2, OVF, VMware, and Xen
Disk size: 4 GB
Note: The EC2 disk size is automatically capped at 10GB for it to work with Amazon's uploading tool.

Disk image
Note: When first launched, a disk image will expand its filesystem to fill available space.
Swap partition: 512 MB

All formats
 Enable extended memory (PAE), to access more than 4GB

Logical Volume Manager
Note: Logical Volume Manager (LVM) applies to the disk image and VMWare formats only.
 Configure LVM

Tim's JeOS Demo
Disk Image
Based on: openSUSE 11.3
Platform: 32-bit
Used space: 390 MB
Download size: 140 MB
0 patterns selected
29 packages selected
151 total packages

Software changes
Added mysql-community-server
Undo
Added 4 package, totaling 31.6 MB
View details...

Take notes

Configure your VM, hard drive, USB or CD/DVD output. You can also upload your newly build operating system directly to the Amazon EC2 Cloud!

You can include WebYast to control your new appliance remotely from the browser!

The screenshot shows the SUSE Studio web interface. At the top, there's a navigation bar with links for Report bug, Gallery, Home, Tim Serong, Help, and Sign out. Below the navigation bar, there are tabs for Start, Software, Configuration, Files, Build (which is selected), and Share.

In the main area, there's a sidebar on the left with a "Send feedback" button and a preview of "Tim's JeOS Demo". The preview shows a green icon with a white swirl, a "Disk Image" link, and details about the appliance: Based on: openSUSE 11.3, Platform: 32-bit, Used space: 390 MB, Download size: 140 MB, 0 patterns selected, 29 packages selected, and 151 total packages.

The main content area is divided into sections for different versions:

- Version 0.0.2**: Shows a dropdown menu set to "USB stick / hard disk image" and a large green "Build" button. Below it, a list of additional formats includes: Live CD/DVD (.iso), VMware / VirtualBox / KVM (.vmdk), Amazon EC2 image, OVF virtual machine (.ovf), Xen guest, and Preload ISO (.iso). A link "Read more about formats..." is also present.
- Version 0.0.1**: Shows a progress bar for "Creating boot image" which is partially filled. To the right, the status is "1:04" and there's a close button ("x"). Below the progress bar, there are "Disk Image" and "Clone" links.

At the bottom of the main content area, there's a note: "Builds older than seven days may be deleted to free up space on our servers. But don't worry, you can rebuild them at any time." It also links to "View MD5 checksums" for verification and "Export your appliance's Kiwi configuration" for advanced users.

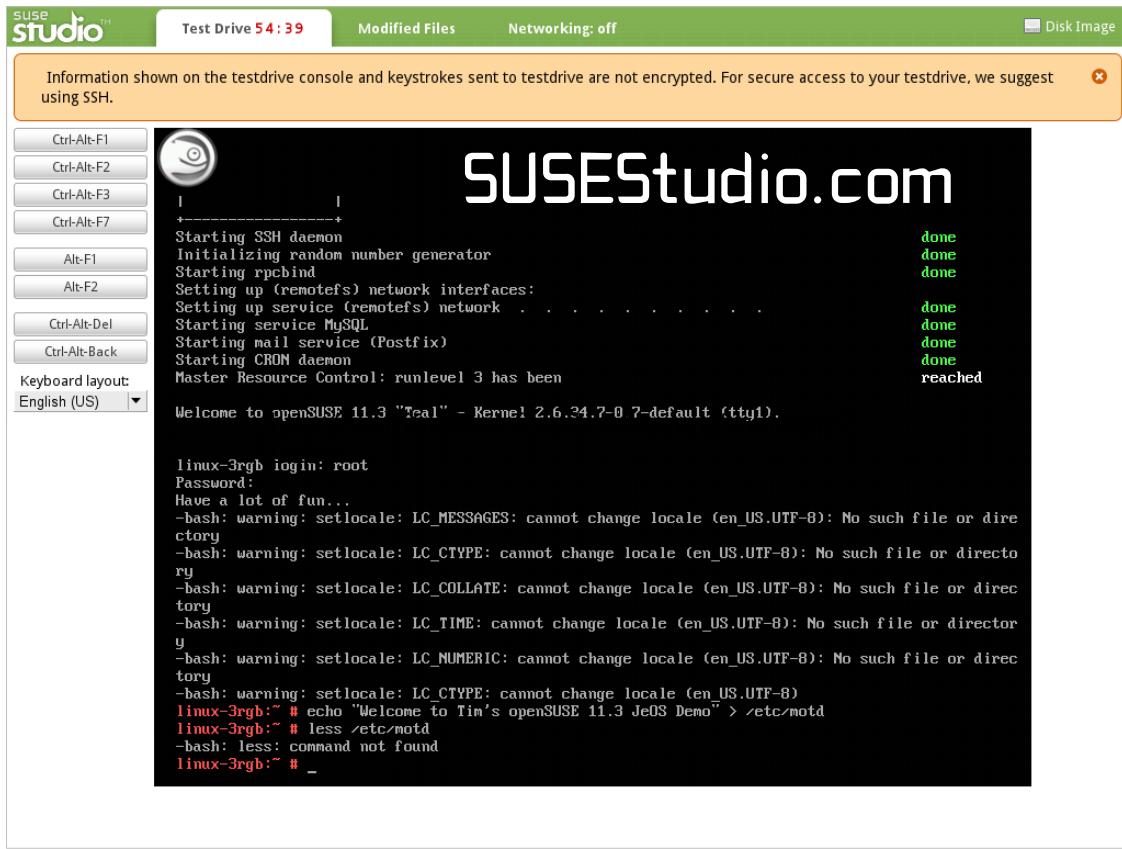
At the very bottom of the sidebar, there's a "Take notes" link.

Studio builds your OS like you want it.

BTW you can export and import KIWI configuration scripts. KIWI is the underlying tech of Studio, it is FOSS and developed in openSUSE.
Gives even more control!

You can also upload full files folders layout with a tar archive.

Add or modify script for each run or first boot.



Once you are done you can test drive your appliance for 45 minutes through a flash plugin or via remote SSH. Any changes you make are saved in the appliance!

That's it, go and try it on susestudio.com!

You

Play with our open technologies

Join a team, work, create : get involved

Meet us on mailing list, forums, IRC, conference,



10

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**Become your
own star!**

**Become your
own geeko star!**

openSUSE®



The mic is up to you!

Questions and Answers





opensuse.org

planet.opensuse.org

opensuse.org/Portal:How_to_participate

opensuse.org/Junior_jobs

features.opensuse.org

build.opensuse.org

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#opensuse-project

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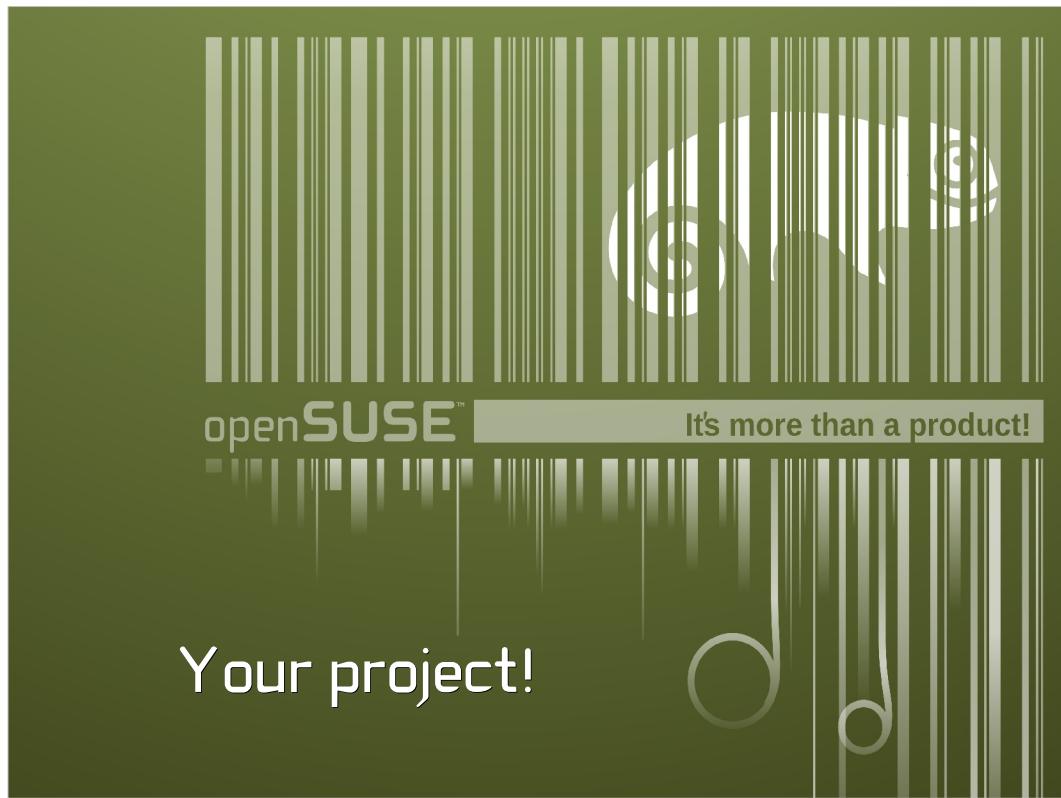
Thanks / Credits

Amazing openSUSE community!
fantastic Bacula community!
dassit organization

Photos : Koustas Koudaras,
sleepy kitty from <http://www.flickr.com/photos/pasotraspaso/>

Proudly presented on openSUSE Factory 12.1





Your project!