KDE 4 on openSUSE 11

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openSUSE.org

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What the .. ?

- openSUSE KDE
- KDE 4 on openSUSE 11.0
- Write your scripts as GUI
- one KDE CD

openSUSE KDE

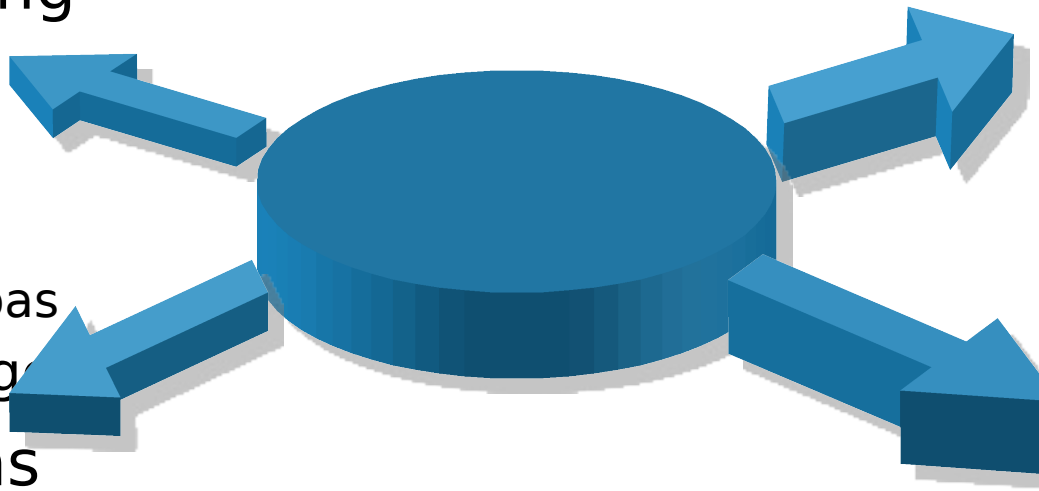
KDE Team at openSUSE

What do we do?

build service

packaging

maintenance



dashboard

kde.org

release team

kdebluetooth kepas

knetworkmanag

applications

kpowersave kerry

system settings

KDE 4 live CD

products

openSUSE SLED

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openSUSE KDE 4 **Live**

- KDE 4 Live CD
  - regularly updated
  - providing KDE 4.0.x and KDE 4.1 snapshots
  - built using openSUSE KIWI
  - trivial to extend into a SDK version

`http://home.kde.org/~binner/kde-four-live/`

openSUSE Build Service

KDE:KDE4:STABLE:

- Desktop: KDE Platform, workspace and core applications
- Extra-Apps: KOffice, Amarok, KDE extragear
- Community: even more, maintained by openSUSE community

KDE:KDE4:UNSTABLE:

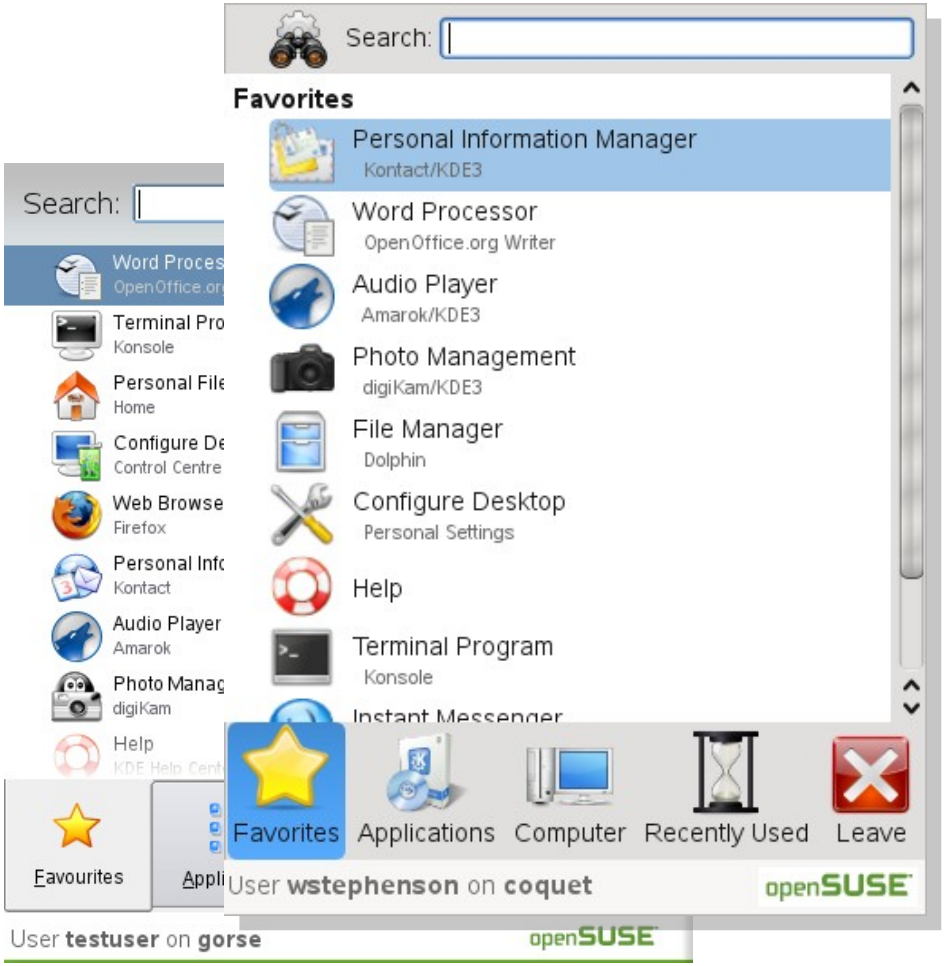
- Desktop: KDE 4.1 development snapshot, weekly update
- Extra-Apps: various experimental applications
- Community: ..

openSUSE Packaging Days

- Friday, April 4th – Saturday April 5th 2008

- Get in contact with openSUSE.org
- Learn how to use the Build Service to package favourite applications
- Create binary packages for all popular Linux distributions, not just openSUSE

openSUSE KDE Goodies



Kickoff:

- Usability-tested new start menu
- first implemented for KDE 3.5 in openSUSE
- now part of KDE 4 implemented in the new Plasma code base
- 'themed' by openSUSE

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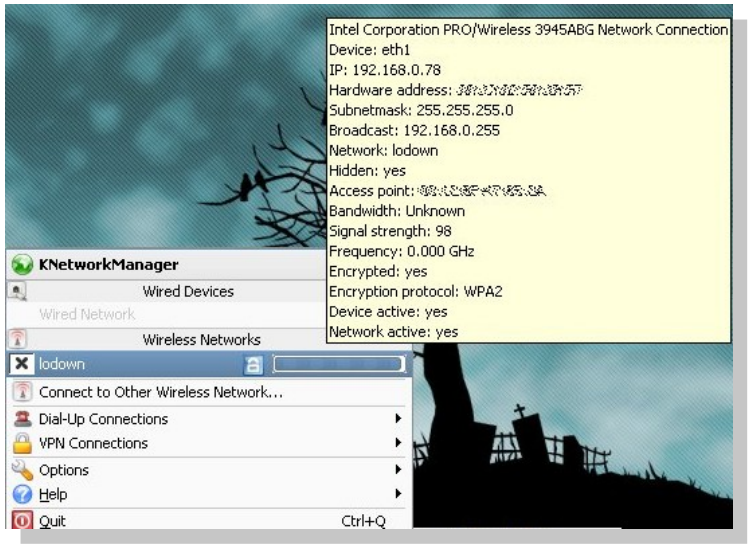
openSUSE KDE Goodies



KNetworkManager:

- control applet for NetworkManager
- developed by openSUSE
- used by everyone
- KDE4 + NM 0.7 versions in preparation

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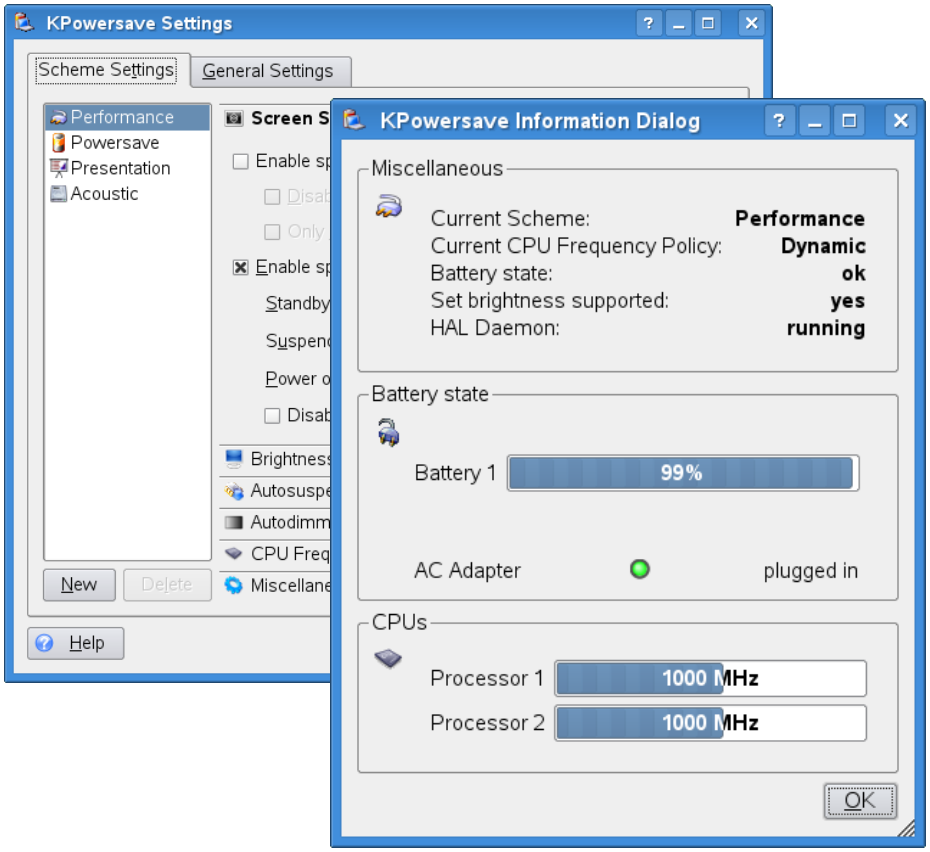
openSUSE KDE Goodies



KPowerSave:

- rich power management application
- KDE 4 port coming

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openSUSE KDE Goodies

System Settings:

- KDE 4 control panel
- maintained/matured for KDE 4 by openSUSE

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openSUSE KDE Goodies

Kerry:

- Search tool for Beagle
- Developed in-house
- being extended for Strigi support for KDE 4

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KDE 4 on openSUSE 11

KDE 4 on openSUSE 11

- openSUSE 11.0 will be released in June and maintained at least until mid 2010
- The KDE that we ship will be maintained
- We need to meet the expectations of users and customers

Motivations

- Prove KDE 4 as an enterprise ready product
- Ship the state of the art in KDE

openSUSE 11.0 alpha

Evaluation currently in alpha phase:

- KDE 4.0.1 as default desktop
  - Plasma improved with feature backports
- Feedback appreciated
- Feature and quality parity with KDE 3 is a concern
  - Blocker list – We need your input!

Alternatively, ship KDE 4.1 beta

- Pro: many more features and apps are ready
- Con: missing stability

Open Topics

- KDE PIM from KDE 4.1?
  - We're discussing with upstream
- Which KDE 4 / KDE 3 applications to ship by default
  - We love Amarok 2, really

- theming and openSUSE customization
- KDE3 backward compatibility
  - not provided by upstream KDE
- Upgrade path provided by openSUSE


writing KDE 4 scripts
can be so easy...

A useful tool in 99 lines of code

Example Problem:

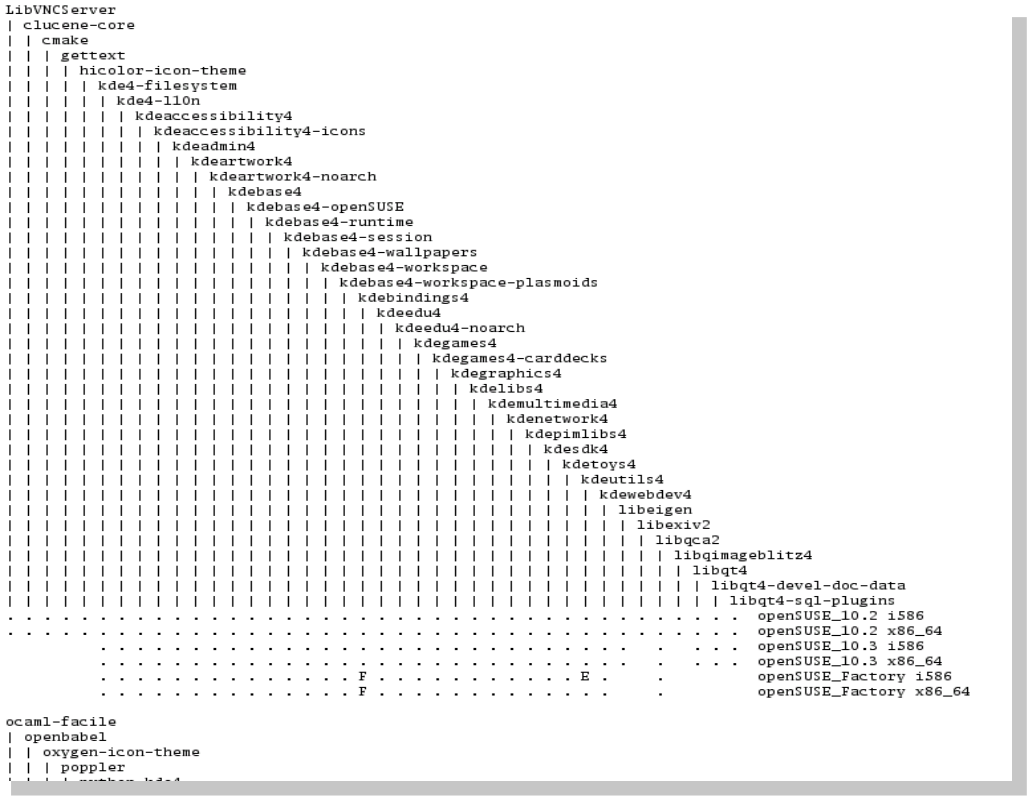
- you want the latest build service packages
- or maybe you're a packager
- you need to monitor the build status of many buildservice repositories

Case Study:

- `osc prjresults` command line
- buildservice webfrontend

osc prjresults

too much console output:



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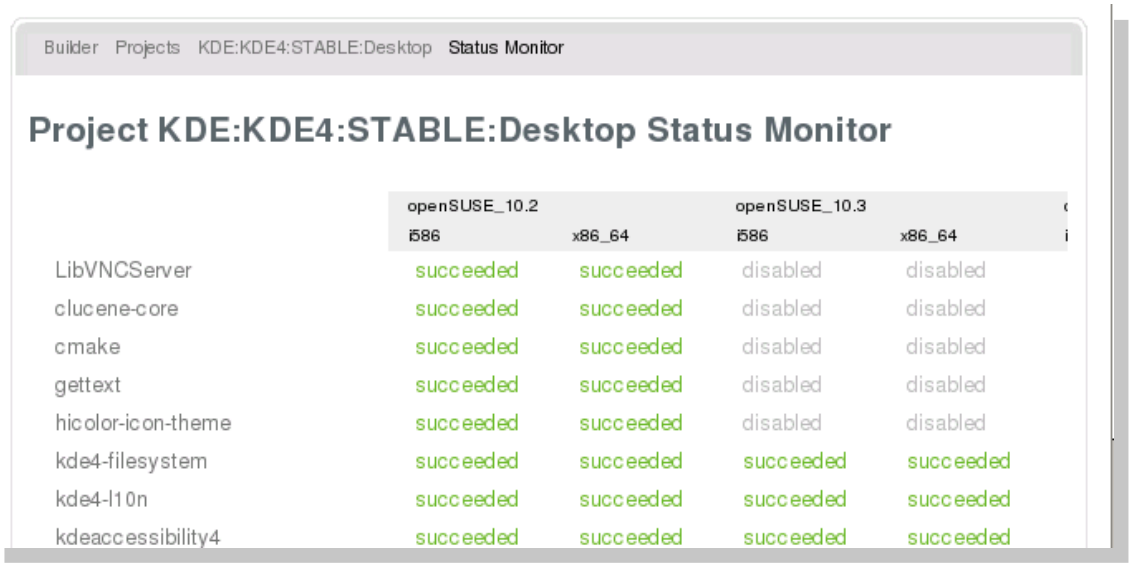
web frontend (I)

lots of data:



Builder Projects KDE:KDE4:STABLE:Desktop Status Monitor

Project KDE:KDE4:STABLE:Desktop Status Monitor

	openSUSE_10.2		openSUSE_10.3		
	i586	x86_64	i586	x86_64	i
LibVNCServer	succeeded	succeeded	disabled	disabled	
clucene-core	succeeded	succeeded	disabled	disabled	
cmake	succeeded	succeeded	disabled	disabled	
gettext	succeeded	succeeded	disabled	disabled	
hicolor-icon-theme	succeeded	succeeded	disabled	disabled	
kde4-filesystem	succeeded	succeeded	succeeded	succeeded	
kde4-l10n	succeeded	succeeded	succeeded	succeeded	
kdeaccessibility4	succeeded	succeeded	succeeded	succeeded	

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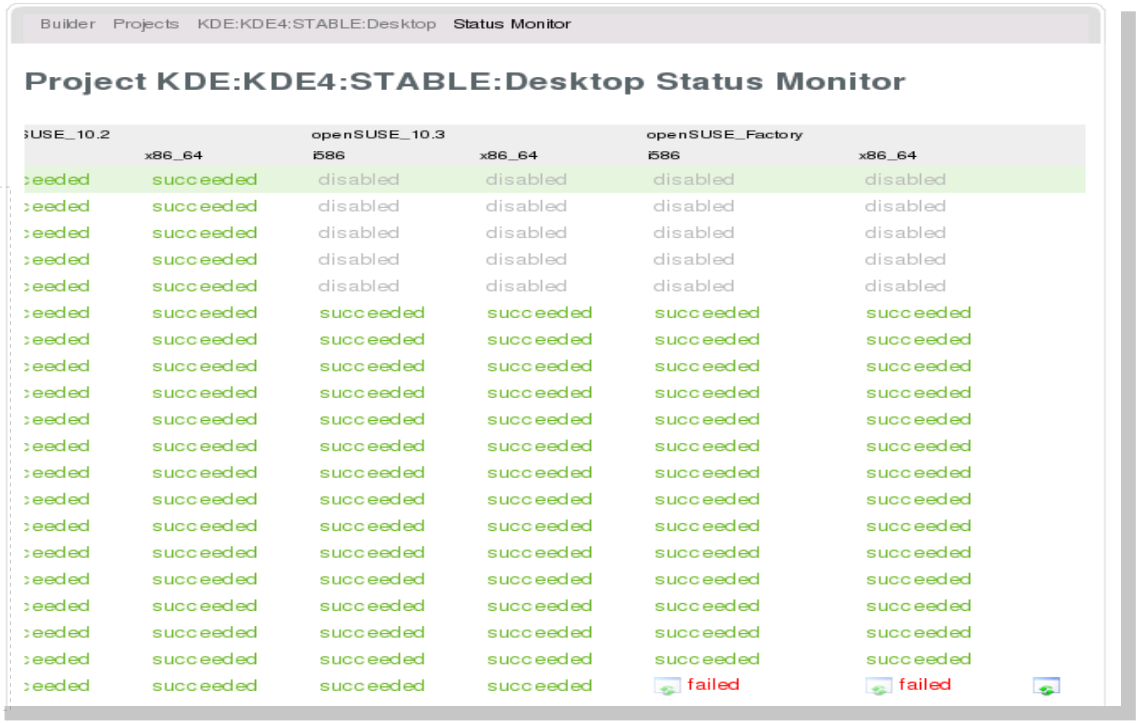
web frontend (II)

which package failed?

?



Design

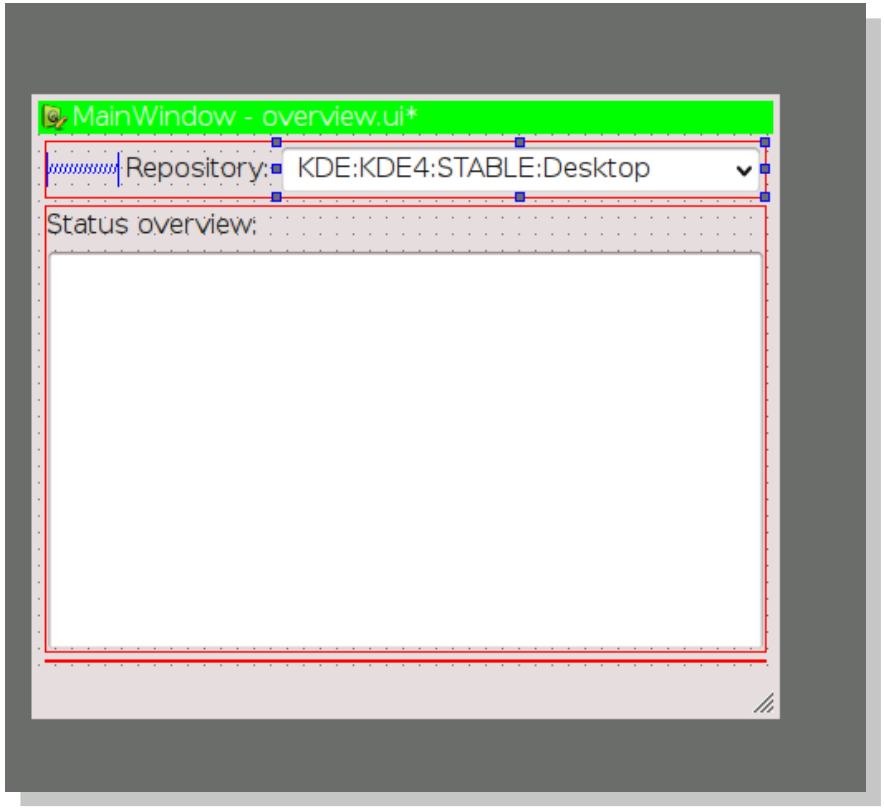
We're lazy. We want something fast

- Development time
  - less than the time to present the slides
- We've no idea about the build service API
- We've used Python a bit..
- We know Qt

lazy, but fast

User interface design

Create the look with Qt Designer:



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Okay.. and now?

- use the Python Qt4 bindings for the user interface
- use osc, the openSUSE buildservice client **python module** for authentication and fetching result XML, then:

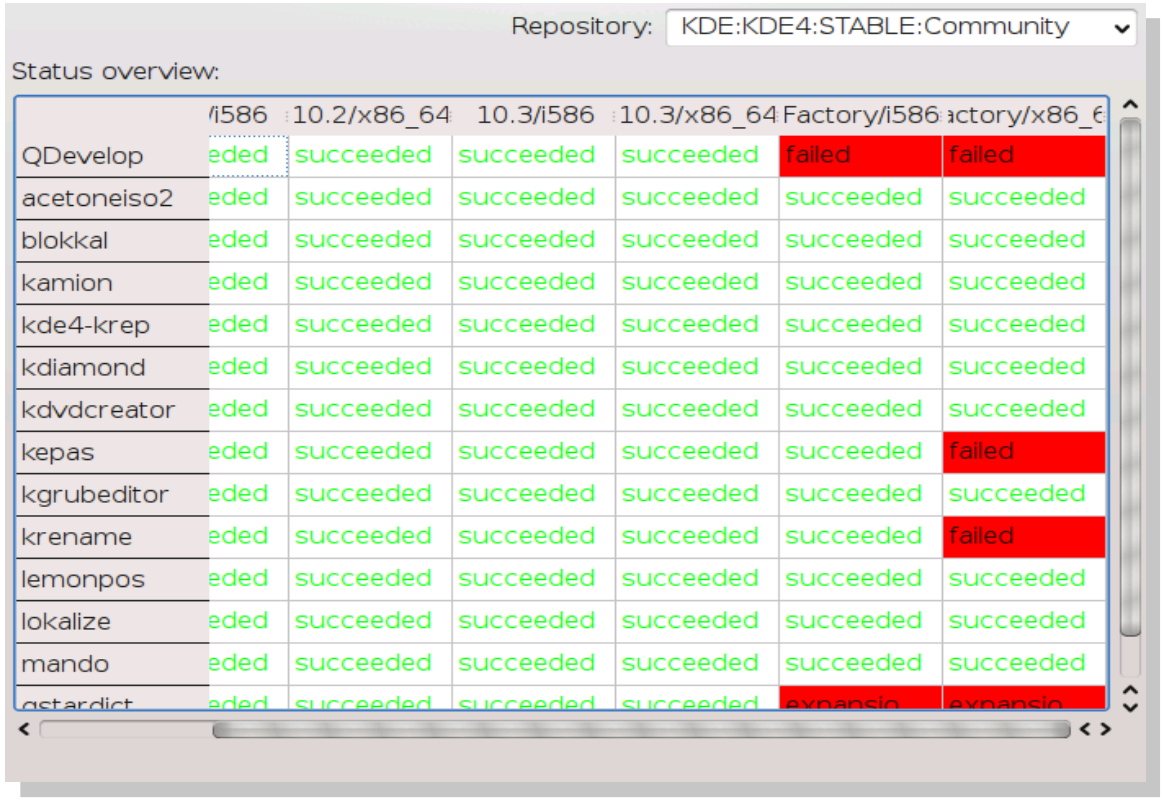
```
from PyQt4 import QtGui,QtCore
from overview import Ui_MainWindow

# osc
from osc import core as osc
from osc import conf
conf.get_config()
```

```
if __name__ == "__main__":
    app = QtGui.QApplication(sys.argv)
    mw = MonitorMain()
    app.exec_()
```

Fetch the results

```
def onRepositoryChange(self, reponame):
    obs = BuildServiceInterface()
    content = obs.getResult(str(reponame))
    if content:
        dom = xml.dom.minidom.parseString( content )
        resultList = obs.handleResults( dom )
        headers = []
        rows = []
        for result in resultList:
            headers.append( str(result.repository.split('_')[-1] + "/" + result.arch ))

        if len(resultList):
            if len(resultList[0].packages):
                for package in resultList[0].packages:
                    rows.append( str(package.name ))

        self._mRepoStatus.setRowCount(len(rows))
        self._mRepoStatus.setColumnCount(len(headers))
        self._mRepoStatus.setHorizontalHeaderLabels(QtCore.QStringList(headers))
        self._mRepoStatus.setVerticalHeaderLabels(QtCore.QStringList(rows))

        column = 0
        for result in resultList:
            row = 0
            for package in result.packages:
                twi = QtGui.QTableWidgetItem(str(package.status))
                if str(package.status) in ("failed", "expansion error"):
                    twi.setBackgroundColor(QtCore.Qt.red)
                if str(package.status) in ("succeeded",):
                    twi.setTextColor(QtCore.Qt.green)

                self._mRepoStatus.setItem( row, column, twi )
                row = row + 1
            column += 1
```

Better?



	/i586	10.2/x86_64	10.3/i586	10.3/x86_64	Factory/i586	actory/x86_6
QDevelop	eded	succeeded	succeeded	succeeded	failed	failed
acetoneiso2	eded	succeeded	succeeded	succeeded	succeeded	succeeded
blokkal	eded	succeeded	succeeded	succeeded	succeeded	succeeded
kamion	eded	succeeded	succeeded	succeeded	succeeded	succeeded
kde4-krep	eded	succeeded	succeeded	succeeded	succeeded	succeeded
kdiamond	eded	succeeded	succeeded	succeeded	succeeded	succeeded
kdvdcreator	eded	succeeded	succeeded	succeeded	succeeded	succeeded
kepas	eded	succeeded	succeeded	succeeded	succeeded	failed
kgrubeditor	eded	succeeded	succeeded	succeeded	succeeded	succeeded
krename	eded	succeeded	succeeded	succeeded	succeeded	failed
lemonpos	eded	succeeded	succeeded	succeeded	succeeded	succeeded
lokalize	eded	succeeded	succeeded	succeeded	succeeded	succeeded
mando	eded	succeeded	succeeded	succeeded	succeeded	succeeded
gstardict	eded	succeeded	succeeded	succeeded	expansio	expansio

Also possible in Ruby, Java, C#...

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openSUSE+KDE, just one CD

All you need to install..

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openSUSE 10.3: 1CD Install

installable KDE desktop on a single CD:

- targeted size: 700MB

'roughly' complete

- compare to default install of the DVD media
- only one language supported
- extensible by adding Online repositories during Installation

How to fit 1GB on a 700MB CD

- Remove optional parts
  - of distribution
  - of applications
- Reduce number of fonts
- Split out languages
- Use weak instead of strong dependencies
- Reduce boot system size
- Reduce static lib copies
- Reduce library set

Language bundles

- Package set contains 86MB of localization for 20 languages
- Average user is only interested in less than 3 languages

Idea:

- generate language bundle that contains for all packages on the CD the localization for one language
- let YaST/the user choose which languages to download
- only put one language on CD (KIWI allows more)

Watch distribution size

openSUSE 10.3:

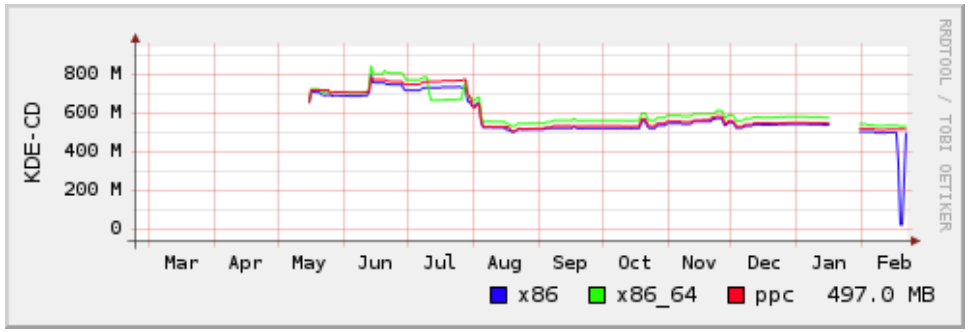
- 106MB boot
- 7MB doc
- 582MB suse

837 packages, 695MB

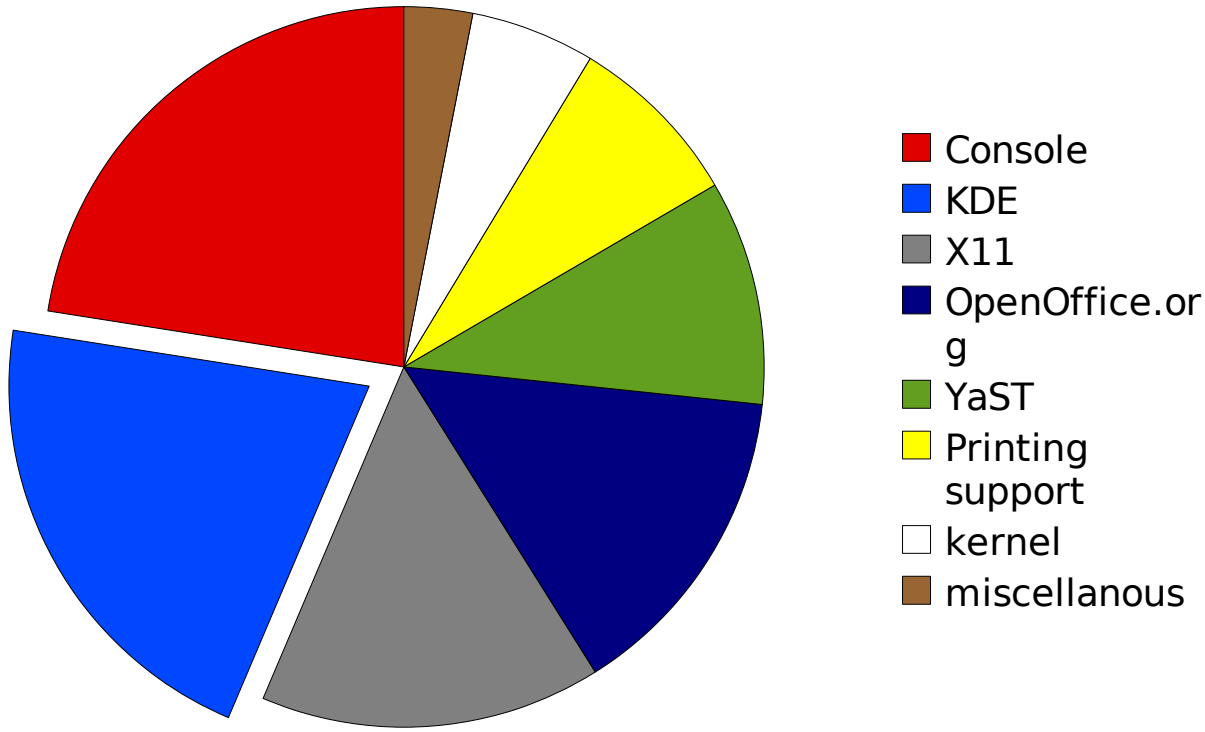
openSUSE 11.0a2:

- 83 MB boot
- 7 MB doc
- 562 MB suse

793 packages, 652MB



Distribution Size – 11.0alpha2+



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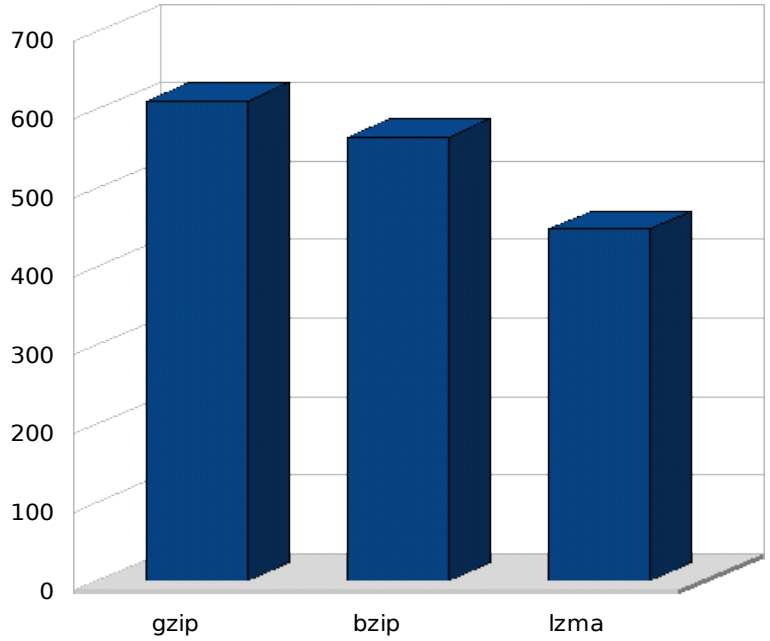
Better compression?

Using a different compression algorithm:

- 611MB as gzip
- 565MB as bzip2
- 448MB as lzma

- 610MB SquashFS



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Q&A

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