

# Zypper

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# In This Talk...

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- Overview 6 minutes
- Tips & Tricks 10 minutes
- Future Plans & How to Contribute 4 minutes
- Q & A

# Overview



# What is Zypper?

- Command line **software manager**
- Command line interface to **libzypp**

```
jkupec : bash
File Edit View Scrollback Bookmarks Settings Help
(root@kompost)# zypper se eclipse
Loading repository data...
Reading installed packages...

S | Name | Summary | Type
---|---|---|---
i | eclipse | Eclipse Platform and Java IDE | package
i | eclipse-archdep-platform | Eclipse platform common files | package
i | eclipse-jdt | Eclipse Java development tools | package
i | eclipse-pde | Eclipse Plugin Development Environment | package
i | eclipse-platform | Eclipse platform common files | package
i | eclipse-source | Eclipse Source | package
(root@kompost)#
```



# History

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- August 2006 - First lines of code
  - Duncan Mac-Vicar Prett, Martin Vidner
- First release 0.6.x
  - openSUSE 10.2 (SLE 10)
- Current stable release 1.0.x
  - openSUSE 11.1 (SLE 11)
- Development releases 1.1.x
  - openSUSE 11.2



# Commands

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- Manage repositories
  - addrepo, removerepo, repos, modifyrepo, refresh, ...
  - addservice, removeservice, refresh-services, ...
- Query
  - search, info, patterns, what-provides
- Install packages
  - install, install-new-recommends
- Update packages
  - list-updates, update (package-wise)
  - list-patches, patch, patches (patch-wise)
  - dist-upgrade (switch to newer distro)



# Commands

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- Lock Packages
  - locks, addlock, removelock, cleanlocks
- Special Commands
  - verify, licenses, versioncmp, targetos
- Help
  - zypper
  - zypper help [command]
  - man zypper



# General Features

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- Non-interactive mode
- XML output
- Work on alternative root directory
- Work with many medium types



# (Devel) Tips & Tricks



# Installation

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- Plain .rpm files
  - install `http://foo.org/somerepo/bar.rpm`
  - install `somedir/my.rpm`
- Specific version or arch
  - install `boost=3.3.1-1`
  - install `boost.i686`
- By provides
  - install `libcurl.so.4`
- Patterns
  - search `--type pattern`
  - install `--type pattern lamp_server`



# Installation

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- Source package and/or its build-dependencies
  - search `--type srcpackage` somepackage
  - `source-install` somepackage
- Hardware drivers + other recommends
  - `install-new-recommends`



# Repository Management

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- Modify several repos at once
  - `zypper modifyrepo --no-refresh --all`
  - `zypper modifyrepo --keep-packages --remote`
- Backup/Restore repos
  - `zypper repos --export myrepos.repo`
  - `zypper addrepo myrepos.repo`
- Use temporary repository
  - `zypper --plus-repo <URI> <command>`
- Load only specified repos
  - `zypper dist-upgrade --repo <repo1> --repo <repo2>`
- Ignore remote repos
  - `zypper --no-remote <command>`



# Using From Scripts & Front-ends

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- Non-interactive mode
  - `zypper --non-interactive <any-command>`
- Turn off security
  - `zypper --no-gpg-checks <any-command>`
- Output verbosity
  - `--quiet`, `normal`, `-v`, `-vv`
- XML output
  - `--xmlout`



# Alternative Root Directory

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- Bootstrap
  - `zypper --root /my/root addrepo \`  
`http://.../openSUSE-11.1/repo main`
  - `zypper --root /my/root install zypper`
- Create and maintain a chroot environment
- Create your own custom system
  - KIWI
  - YaST Product Creator



# Working With Various Media

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- ISO image as repository
  - addrepo 'iso:///?iso=foo.iso&nfs:///server/imgdir' foo
  - addrepo 'iso:///?iso=/path/to/your/image.iso' image
- SMB share
  - addrepo 'smb://user:pass@host/path'
- USB drive (or any other hard drive)
  - install 'hd:///path/to/foo.rpm?device=/dev/sdb1'
- More examples
  - <http://en.opensuse.org/Libzypp/URI>



# Miscellaneous Tricks

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- Look what your package drags in
  - `zypper --disable-system-resolvables` install zypper
- First download all, then install
  - `zypper modifyrepo --keep-packages --remote`
  - `zypper <command> --dry-run [args]`
  - `zypper <command> [args]`





# Services

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- Add one URL, get repos automatically
  - zypper **addservice** http://foo.org myservice
  - zypper **refresh-services**
  - zypper repos OR zypper **services --with-repos**
  - zypper modify-repo --enable foorepo
- Refresh to update the repos
  - zypper **refresh-services**
- More info:
  - [http://en.opensuse.org/Standards/Repository\\_Index\\_Service](http://en.opensuse.org/Standards/Repository_Index_Service)

# Future Plans



# Future Plans

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- Improved installation summary
  - Version, arch, vendor changes
  - Recommended, suggested list
  - Pager
  - View package change logs
  - View dependency tree
- Configuration file
  - ~/.zypperrc, INI format
- **--from** <repository> option



# Future Plans

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- **info** command remake
- More dependency information
  - requires, provides, conflicts, suggests, what-requires, what-conflicts, ...
- More output polishing
  - Overall installation progress with ETA
  - Download rate while refreshing
  - Help texts in all prompts
- Package history log view



# How To Contribute

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- Pick up a bug and fix it
  - wiki: [Zypper/Bugs\\_For\\_Adoption](#)
- Pick up an idea and implement it
  - wiki: [Zypper/Development#Future\\_Plans](#)
- Come up with your own idea
- Get general zypper development info
  - wiki: [Zypper/Development](#)



## More Info

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- Homepage: <http://en.opensuse.org/Zypper>
- Man page: `man zypper`
- Blog: <http://jniq.blogspot.com>
- GIT repo:  
`git://git.opensuse.org/projects/zypp/zypper.git`

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