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TEX Live Manager's rare gems
User mode and multi-repository support

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Overview

User mode	Multi repository
background	
operation mode	
setup, run	add, pinning
example runs	
warnings	

User mode

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User mode – why do it?

Normal operation mode

- ▶ manages the full installation
- ▶ provides binaries
- ▶ system wide config: paper, formats, hyphenation …
- ▶ all-or-nothing access is required

What to do when you don have access to these files?

- ▶ multi-user systems with system-wide installation
- ▶ distribution TEX Live with need for updates

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What is it?

user mode

- ▶ manages TEXMFHOME
- ▶ can only install packages that have all the files under a `texmf` tree, i.e., no packages with scripts or binaries
- ▶ does not manage formats, hyphenations
- ▶ integrates with multi-updmap

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Necessary steps

1. initialize the user tree – by default TEXMFHOME
   generates a minimal `tlpdb`, creates a few necessary
   files
2. set up repositories
   defaults to CTAN mirror
3. install packages

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Setting up the user tree

```
$ tlmgr init-usertree
$
```

```
$ tlmgr --usermode info --only-installed
$
```

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Installing a package

```
$ tlmgr --usermode install 12many
tlmgr: package repository /var/www/norbert/tlnet
[1/1, ??:??/??:??] install: 12many [376k]
tlmgr: package log updated: /home/norbu/texmf/↩
    ↪web2c/tlmgr.log
running mktexlsr ...
done running mktexlsr.
$
```

Real world trial

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Supported operations

`install` packages and depending packages are installed, collection-collection dependences are not followed

`backup`, `restore`, `remove`, `update` like in system mode

`option`, `paper`, `generate` works and changes files in the user tree

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Warnings

files in TEXMFHOME override files in system dir –
updates on the system tree will come through

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configuration file mess

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⚠ size of TEXMFHOME versus `ls-R`

⚠ configuration file mess

Future work

- GUI support
- distribution installation mode (no `tlpdb`)
- independent installation support – no main TEX Live installation necessary

multi repository support

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multi repository support for `tlmgr` — background

- traditionally `tlmgr` only supports one repository, the main TEX Live repository
- since now 2 years (at least) additional repositories are in common use:

  `tlcontrib` (for testing releases and items not distributable in TEX Live)

  `tlptexlive` Japanese TEX integration

  `tlcritical` by the TEX Live team, test release of the TEX Live Manager

  Korean TEX User Group (no details)

multi repository support – implementation notes

- ▶ distinction between main and subsidiary repositories
- ▶ by default everything is only taken from the main repo
- ▶ to get a package from a subsidiary repo one has to pin it to this repo
- ▶ absolute revision numbers are not compared between repositories, only the pinning counts (difference to Debian)

How to add/remove repositories

New `tlmgr` action `repository`:

```
tlmgr repository list
tlmgr repository add url [tag]
tlmgr repository remove url|tag
```

Where the `tag` is a (optional) short-hand for `url`. The main repository always has the tag `main`.

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How to pin a package – format of the pinning file

- the pinning is specified in
  TEXMFLOCAL/`tlpkg/pinning.txt`
- format of this file: lines of the form
  `repo:pkg[,pkg]`
  where
  `repo` full url or a repository tag (see later)
  `pkg` shell-style glob for package names

Pinning with `tlmgr`

New `tlmgr` action `pinning`:

```
tlmgr pinning show
tlmgr pinning add <repo> <pkgglob> ...
tlmgr pinning remove <repo> <pkgglob> ...
tlmgr pinning remove <repo> --all
```

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Example setup: `tlptexlive`

Current status:

```
$ tlmgr repository
List of repositories (with tags if set):
        /var/www/norbert/tlnet (main)
```

Add the `tlptexlive` repository, and check again:

```
$ tlmgr repository add /var/www/norbert/tlptexlive tlptexlive
tlmgr: added repository with tag tlptexlive: /var/www/norbert/tlptexlive
$ tlmgr repository
List of repositories (with tags if set):
        /var/www/norbert/tlnet (main)
        /var/www/norbert/tlptexlive (tlptexlive)
$
```

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tlmgr: added repository with tag tlptexlive: /var/www/norbert/tlptexlive
$ tlmgr repository
List of repositories (with tags if set):
        /var/www/norbert/tlnet (main)
        /var/www/norbert/tlptexlive (tlptexlive)
$
```

Example cont.

Tell TEX Live Manager to get everything * from the new
repository:

```
$ tlmgr pinning add tlptexlive '*'
tlmgr: package repositories:
main = /var/www/norbert/tlnet
tlptexlive = /var/www/norbert/tlptexlive
tlmgr: new pinning data for tlptexlive: *
$
```

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Exampl cont.

Now check for updates

```
$ tlmgr update --list
tlmgr: package repositories:
main = /var/www/norbert/tlnet
tlptexlive = /var/www/norbert/tlptexlive
tlmgr: saving backups to /home/norbert/tl/tug2013/tlpkg/backups
update:   dvipdfmx.x86_64-linux [328k]: local:    30831, source: 31001@tlptexlive
other candidates: 30831@main
update:   dvips.x86_64-linux [136k]: local:    30204, source: 31002@tlptexlive
other candidates: 30204@main
update:   ptex.x86_64-linux  [530k]: local:    30519, source: 31001@tlptexlive
other candidates: 30519@main
update:   uptex.x86_64-linux [526k]: local:    30519, source: 31001@tlptexlive
other candidates: 30519@main
$ tlmgr update --all
...
```

Installing/updating a package

Install the package:

```
$ tlmgr install pmetapost
tlmgr: package repositories:
main = /var/www/norbert/tlnet
tlptexlive = /var/www/norbert/tlptexlive
[1/2, ??:??/??:??] install: pmetapost.x86_64-linux @tlptexlive [671k]
[2/2, 00:00/00:00] install: pmetapost @tlptexlive [1k]
tlmgr: package log updated: /home/norbert/tl/tug2013/texmf-var/web2c/tlmgr.log
running mktexlsr ...
done running mktexlsr.
$
```

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Restrictions and caveats

- ▶ no way to make purely number based repository selection work
- ▶ not all operation of TEX Live Manager are supported
- ▶ use with caution!
- ▶ due to the fixed pinning, if an outdated package is not removed from the subsidiary repository, you will remain stuck with it even if main ships a newer version

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Closing

Any wishes and requests?

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Closing

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Thanks