
Transtats Documentation

Release 0.7.3

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Track Translation Completeness.

In a software release cycle, some of the necessary localization steps lack attention which affect translation quality and delivery. These steps (for a package) are extracting or updating language resource, pushing that to translation platform, pulling and packaging translations, quality checks etc. Transtats helps to tie up loose ends and make packages ready to ship with translation completeness. Further, its an attempt to bring automation in i18n l10n space through jobs.

Transtats Server is a simple django application with PostgreSQL backend. Has one CLI and some ansible playbooks for deployment. And, can be deployed on container based systems.

1.1 Summary and Details

1. **Releases - Translation Status** Translation update volume estimation for a product release at an early stage of a release cycle. It has three views: combined, detailed and language-wise. Combined will sum up translated and untranslated for all languages for a package. Detailed contains language wise %age representation. Language-wise shows overall picture as well as translated, untranslated statistics of every package for each language.
2. **Packages - Translation Completeness** Translation progress, gaps, errors of a package by syncing with source repositories, translation platforms and build systems. Package needs to get sync'd with all three to fill statistics. Stats are represented in tabular and graph forms, per language also. This shows translation trends of last few releases. Summary highlights out-of-sync packages.
3. **Translation Coverage** Coverage of a group of packages for a specific release in associated or selected languages. These are based on graph rules. Packages must have branch mapping and respective sync done before they can participate in graph rule.

1.2 Configuration

1. **Inventory** Languages & their sets, translation platforms and release streams are grouped as inventory. One release stream can have multiple release branches. Like, Fedora is a release stream and Fedora 28, Fedora 29 are release branches. Inventory could be managed through admin panel. Sample data contains some of them. Inventory are basis to release branches, packages, jobs and graph rules. And hence probably the first thing to look at.
2. **Release Branch** A particular release which has a schedule and information regarding *in how many languages it will be available*. Release branch are primary to branch mapping. A package associated with any of the release streams, automatically being tracked for all release branches underneath. One release branch can be associated with one language set.
3. **Packages** Translation progress would be tracked for added packages. They should have upstream repository URL and translation platform project URL. A package can be linked with multiple release streams and

should have a branch mapping. Once all versions / tags are sync'd with respective sources, differences could be generated. Packages should be sync'd at intervals.

1.3 Jobs

1. Predefined Jobs

Functions which are basis to fetch some essential data

- sync with translation platform for projects
- sync with release schedule to update calendar
- **sync with build system for build tags** *required for branch mapping (this is one of the first steps)*

Logs are kept.

2. YAML Based Jobs

Currently, three templates are to choose from. They can be used as-is.

`syncupstream`, `syncdownstream` and `stringchange`

- ***syncupstream*** clone package source repository, filter translation files and calculate statistics
- ***syncdownstream*** locate latest built SRPM, unpacks, filter translation files and calculate statistics
- ***stringchange*** clone package source repo, generates template (POT) as per given command, download respective template from platform and compare/find diff

Requires four values:

- Package Name (*derived stats can be saved only if this is added already*)
- Build System (*build system associated with added release stream*)
- Build Tag (*To fill drop down with build tags, run sync job for build tags*)
- Release Slug (*one can find this out on release page, at tooltip or in URL*)

SyncDownstream could be run for any package (also for those not added in transtats) and for any build tag available. This makes the job really wonderful tool to inspect SRPM.

Dry runs are also supported. Each YAML job has a unique URL to see details and share!

Transtats APIs

1. **Ping Server** : <transtats_server>/api/ping

Returns server version.

```
GET /api/ping HTTP/1.1
```

2. **Package Status** : <transtats_server>/api/package/<package_name>

Returns translation stats of package for enabled languages, for example abrt.

```
GET /api/package/abrt HTTP/1.1
```

3. **Graph Rule Coverage** : <transtats_server>/api/coverage/<graph_rule_name>

Returns translation coverage according to graph rule, for example rhinstaller.

```
GET /api/coverage/rhinstaller HTTP/1.1
```

4. **Release Status** : <transtats_server>/api/release/<release_branch_name>

Returns translation stats of packages which are being tracked for a given release, for example fedora-29.

```
GET /api/release/fedora-29 HTTP/1.1
```

- a. **Release Status Detail** : <transtats_server>/api/release/<release_branch_name>/detail

Returns per language translation stats of packages for a release.

```
GET /api/release/fedora-29/detail HTTP/1.1
```

- b. **Release Status Locale** : <transtats_server>/api/release/<release_branch_name>/locale/<locale>

Returns translation stats of packages for a release of a single language.

```
GET /api/release/fedora-29/locale/ja_JP HTTP/1.1
```

5. **Job Details**: <transtats_server>/api/job/<job-id>/log

Returns job log against given job id, for example 2a6d4b23-6a6b-4d0e-b617-a0ece01d790f.

```
GET /api/job/2a6d4b23-6a6b-4d0e-b617-a0ece01d790f/log HTTP/1.1
```

`transtats-cli` is a command line interface to query transtats server.

- **Configuration**

`transtats.conf` should be placed inside `~/.config/` directory. Transtats server url and API token can be added as

```
[server]
server_url = https://transtats.fedoraproject.org
token = <API-token-from-server>
```

- **Usage**

```
$ transtats [OPTIONS] COMMAND [ARGS]...
```

- **Options**

--help Show help message and exit.

- **Commands**

1. **coverage** Translation coverage as per graph rule.

```
transtats coverage [OPTIONS] GRAPH_RULE
```

2. **job** Runs a job and/or show the job log.

```
transtats job [OPTIONS] COMMAND [ARGS]...
```

3. **package** Translation status of a package.

```
transtats package [OPTIONS] PACKAGE_NAME
```

4. **version** Display the current version.

```
transtats version [OPTIONS]
```

5. **release** Translation status of a release.

```
transtats release [OPTIONS] RELEASE_SLUG
```

4.1 Check Inventory

Graphs will be generated for enabled languages, aliases are used while syncing. One can create a language set, which can be associated with a release branch. Multiple instances of a translation platform can be added. A release branch (for example - Fedora 28) should have a language set and a schedule. Transtats jobs sync with upstream repository, translation platform and build system to keep stats, build tags and schedule latest.

4.2 Add and Configure Packages

While adding a package, upstream URL is required. And package name is verified with selected translation platform. Translation of a package can be tracked for multiple release streams. Package should be sync'd with translation platform and build system. Once sync'd, branch mapping can be created. It maps Transtats release branches with most suitable project versions available at translation platform and with appropriate build tags. Package can be sync'd with upstream repo as well.

4.3 Generate Diff

Once we have all versions / tags mentioned in branch mapping of a package sync'd with either translation platform or build system, differences can be created and observed. This answers - for a package - latest translations are packaged or not? If not, is some patch applied at the last moment? Which languages need attention?

4.4 Add Graph Rule

Translation coverages (translation status of a group of packages in a set of languages to a given release) are based on rules. Slug form of rule name would be saved. This should be specific for a release branch. Packages having branch mapping created can only be included here. Languages could be picked from language set associated with the release

branch or from enabled ones. Somehow if a package is not tracked for a release stream and selected for inclusion Transtats would show an error.

4.5 Translation Status

Summary and Details Transtats has two traversal options: releases and packages. One can see high level summary and can pick any one release or a package for details. Summary can tell you - packages which are out of sync, translation workload estimate for each language per release, and much more. Detailed views contain language wise stats, translation position etc. Another form is coverage, which depends on graph rules and branch mapping.

5.1 Try and test

- **Docker**

Get docker daemon running. Build or pull `transtats` image and get started.

- Build the image (*optional*)

- * **Clone the repo and build the image**

```
$ git clone https://github.com/transtats/transtats.git
$ cd transtats
$ sudo docker build -t transtats/transtats deploy/docker
```

- **Pull the image** (*No need to pull, if you have built the image*)

```
$ sudo docker pull docker.io/transtats/transtats
```

- **Run the image**

```
$ sudo docker run -d --name container_name -p 8080:8015 transtats/
↳transtats
```

or you can specify custom database credentials using environment variables

```
$ sudo docker run -d --name container_name -p 8080:8015 -e DATABASE_
↳NAME=db_name \
    -e DATABASE_USER=db_user -e DATABASE_PASSWD=db_passwd transtats/
↳transtats
```

- Application should be available at `localhost:8080` with `transtats | transtats` as login credentials.

5.2 Hack and Develop

- Install and run Ansible, Docker and Vagrant.
- **This will setup devel environment and run container plus, *ssh* into it**

```
$ sudo vagrant plugin install vagrant-hostmanager
$ git clone https://github.com/transtats/transtats.git
$ cd transtats
$ sudo vagrant up
$ sudo vagrant ssh
```

- **Run application**

```
$ cd /workspace
$ make run
```

- Hit `localhost:8080` in browser
- Create migrations `make migrations`
- Collect static files `make static`
- Run tests `make lint test`
- Generate docs `make docs`

5.3 Contribution

- The *devel* branch is the release actively under development.
- The *master* branch corresponds to the latest stable release.
- If you find any bug/issue or got an idea, open a [GitHub issue](#).
- Feel free to submit feature requests and/or bug fixes on *devel* branch.
- Transtats uses [CircleCI](#) for tests.

As the project evolves, a roadmap will be published for each major release. Comments, suggestions, and requests to the current roadmap are welcome. Our goal in publishing a roadmap is transparency and community inclusion. A roadmap is the team's best guess based on experience, community requests, and feedback.

6.1 Transtats 0.8.0

We are currently working on 0.8.0 release.

Backlog is [here](#). For release features list please look at [milestone](#).
Target delivery: By end of July 2019

6.2 To Do

- **Manage Inventory**
 - Languages and their Sets (Done)
 - Translation Platforms (Done)
 - Product and their Releases (Done)
- **Translation Status of Packages, sync with:**
 - **Translation Platform (Done)**
 - * [DamnedLies](#)
 - * [Transifex](#)
 - * [Weblate](#)

- * Zanata
- **Upstream Repository (Done)**
 - * git
- **Transtats Jobs**
 - **YML Based Jobs**
 - * Parser & ActionMapper (Done)
 - Streamline Jobs by Templates (Done)
 - Locate String Breakage (Done)
- **Translation Status of Packages, sync with:**
 - **Build System (Done)**
 - * koji
- Transtats Engagements
 - **Interactions**
 - * Dashboard: Integration of [PatternFly](#) UI (Done)
 - * **Better stats representation in (In Progress)**
 - Release, Package and Job Details
 - * Use-case based UI designs
 - * More sub-commands and flags in CLI
 - **Flexibility**
 - * **Scheduling of Jobs as per Release Schedule**
 - to enable schedule based auto-sync
 - * Emails about push/pull or translation status/diff
- **Expanding Support**
 - **Translation Platform**
 - * [Pootle](#)
 - **Translation File Format *in Jobs***
 - * Java files (properties, dtd)
 - * PHP, JS (ini, json)
 - More YML Job Templates

CHAPTER 7

Releases

Please look [github releases](#) for release details.
See changelog [here](#).

CHAPTER 8

License and Credits

Transtats is licensed under [Apache License, Version 2.0](#)

Contributors

- [transtats](#)
- [transtats-cli](#)