

Compute the SemanGit RDF Dataset

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1 Before you start

1.1 What is the Semangit RDF Dataset ?

The Semangit RDF Dataset is cumulative turtle-datasets <https://www.w3.org/TR/turtle/> of all publicly accessible meta-data on Github. It is computed from data sets provided by www.ghtorrent.com [1] and follows the SemanGit Ontology which we develop and provide under <https://github.com/SemanGit/SemanGit/tree/master/Documentation/ontology>. For documentation, additional information and references please visit our website www.semangit.de

1.2 Licenses

For following these Instructions and using the generated RDF you will need to comply with different license agreements.

- The required input datasets are licensed by the GHtorrent project [1]. The according license agreements can be found here: <http://ghtorrent.org/faq.html>
- The processing of the datasets requires the usage of the Java Runtime Environment. Depending on the distributor you choose different license conditions may apply.
- The processing of the dataset requires the usage of software developed by us. The software can be obtained from <https://github.com/SemanGit/SemanGit>. The software is object to the MIT License:

MIT License

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1.3 Warnings

- The computations described in the following parts are requiring around 1.3 TB of free space. Running out of space may harm you system.
- We recommend doing all of the following steps on:
 - A separate empty/new partition without any important files
 - An external hard drive without any important files
 - A virtual Machine with at least 1.3TB of free space
- The computation requires additional software (JAVA RUN TIME ENVIRONMENT) to be installed. We don't provide an installation guide for this software.

2 Download a monthly dump

1. Visit www.ghtorrent.org
2. Go to *Downloads* > *Downloads*
3. Click on `mysql-XXXX-XX-XX` to download the selected dump

Note: Please check ghtorrent's license agreement <http://www.ghtorrent.org/faq.html>

3 Extract the dump

1. Create a new Folder with an arbitrary name
2. Extract your downloaded .zip to the new Folder

Note: For the further processing it is essential that the extracted .csv files all end up in the same reserved folder which shouldn't contain any other files. Depending on your chosen extraction method, the required files will either be located in `mysql-XXXX-XX-XX` withing your new Folder or directly in new Folder

4 Download the Converter

1. Visit <https://github.com/SemanGit/SemanGit>
2. Click on **Converter @ XXXXXXXX**
3. Click on **Clone or download**, Download the .zip and extract it to an arbitrary location.
4. After extraction you can delete the downloaded .zip file.

Note: Step 2 ensures that you get the latest functioning release. If you want to use the experimental version (not recommended), you can visit <https://github.com/SemanGit/Converter> instead.

5 Execute the Converter

Warning: The following steps requires that you have about 800GBs of free space left on the partition where you extracted `mysql-XXX-XX-XX`. Having not enough space might harm your system. If you notice that you run out of space during the processing open your systems Task Manger and quit the JAVA Environment. You have to perform a manual clean-up afterwards for freeing the allocated space, by deleting all files which end on `.ttl`

1. Make sure that you have a working Java Run-Time Environment. You can find instructions on checking your JRE here: https://www.java.com/en/download/help/version_manual.xml

2. Open your systems Console/Terminal or Shell.
3. Move within your Console to the location where you downloaded the Converter */out/artifacts/converter.jar*
4. You can now execute

```
java -jar converter.main.jar path/to/extracted/files [options]
```

from your console.

- **path/to/extracted/files:** The path where your extracted .csv files (**from Step 2**) are located.
- **options** A list of all supported options can be obtained from <https://github.com/SemanGit/SemanGit> > *Convert @ XXXXXXXX* or in the **readme.md** contained in downloaded Converter folder.

References

- [1] Georgios Gousios. The ghtorrent dataset and tool suite. In *Proceedings of the 10th Working Conference on Mining Software Repositories*, MSR '13, pages 233–236, Piscataway, NJ, USA, 2013. IEEE Press.