

The IDP-Z3 reference manual

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1 Introduction

IDP-Z3 is a collection of software components implementing the Knowledge Base paradigm using the IDP language and a Z3 SMT solver.

These components together enable the creation of these solutions:

- the Interactive Consultant, which allow a knowledge expert to enter knowledge about a particular problem domain, and an end user to interactively find solutions for particular problem instances;
- (coming up) an interactive training tool to teach the Knowledge Base paradigm;
- (coming up) a program with a command line interface to compute inferences on a knowledge base;
- (coming up) a web-based Interactive Development Environment (IDE) to create Knowledge bases.

The source code of IDP-Z3 is publicly available under the GNU Affero General Public License.

1.1 Installation

IDP-Z3 is installed using the python package ecosystem, which supports Unix, Windows and MacOS.

- install python 3.8, with pip3, making sure that python3 is in the PATH.
- optional: create a virtual environment
- use git to clone <https://gitlab.com/krr/autoconfigz3> to a directory on your machine
- open a terminal (or command prompt) in that directory and run the following commands to launch the Interactive Consultant locally.

```
python3 -m pip install -r requirements.txt
python3 main.py
```