

# Docker use cases

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# Docker use cases

- ▶ LODAtlas
  - ▶ Demo
  - ▶ Running data processor on Gulliver
- ▶ Virtuoso installation
- ▶ Node.js server deployment
- ▶ SVN server for conversion from SVN to Git

# LODAtlas

## System components

- ▶ Data manager module
  - ▶ MongoDB
  - ▶ Postgresql
  - ▶ Elasticsearch
  - ▶ Python libraries
  - ▶ JRE
- ▶ Server module
  - ▶ Tomcat server
  - ▶ Elasticsearch

- ▶ Easy for external users to run the demo without having to install all dependencies
- ▶ Easy to create several instances of the environment, run on Gulliver
- ▶ Easy to update existing application
- ▶ Easier to maintain if version of any of the dependencies change
- ▶ Easy to track changes to application environment

# Virtuoso installation

- ▶ Difficulty in installation because of incompatible package versions.
- ▶ Official Virtuoso docker image too heavy (1.73GB)
- ▶ Own version 398MB
- ▶ Possible to use GitLab docker registry
- ▶ With load script, very easy to install sparql server anywhere and load dumps.
- ▶ Installation time is reduced.

# Node.js server deployment

## System components

- ▶ Node.js server
- ▶ MongoDB
- ▶ Virtuoso sparql server

# docker-compose.yml

```
version: "3.5"
services:
  mongo:
    image: mongo:3.7
    container_name: discover_mongo
    restart: on-failure
    ports:
      - "27017:27107"
    network_mode: "host"
  discover:
    image: registry.gitlab.inria.fr/ilda-semantic/discover:latest
    container_name: discover_server
    environment:
      - NODE_ENV="production"
    ports:
      - "5000:5000"
    depends_on:
      - "mongo"
    network_mode: "host"
```

# Pros and cons

## Pros

- ▶ Full control over the execution environment
- ▶ Easy to create several instances of an environment, no need to manually maintain on multiple servers
- ▶ Easy to update existing application
- ▶ Easy to track changes to application environment

## Cons

- ▶ Using only in development environment, no real cons
- ▶ Requires too much space

## To consider

- ▶ Production environment
- ▶ Security issues
- ▶ Performance
- ▶ Swarm mode