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# **mg-rest-service Documentation**

*Release 0.0.1*

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## Requirements and Installation

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### Requirements

#### Software

- Mongo DB 3.2
- Python 2.7.10+
- pyenv
- pyenv virtualenv
- pip

#### Python Modules

- DMP
- Flask
- Flask-Restful
- Flask-APScheduler
- Waitress

### Installation

#### Basics

Directly from GitHub:

```
1 git clone https://github.com/Multiscale-Genomics/mg-rest-service.git
2 cd mg-rest-service/
3 pip install -e .
```

Using pip:

```
1 pip install git+https://github.com/Multiscale-Genomics/mg-rest-service.git
```

## Setting up a server

```
1 git clone https://github.com/Multiscale-Genomics/mg-rest-dm.git
2
3 cd mg-rest-service
4 pyenv virtualenv 2.7.12 mg-rest-service
5 pyenv activate mg-rest-service
6 pip install git+https://github.com/Multiscale-Genomics/mg-dm-api.git
7 pip install -e .
8 pyenv deactivate
```

Requires a file with the name *mongodb.cnf* with the following parameters to define the MongoDB server:

```
1 [rest]
2 host = localhost
3 port = 27017
4 user = mongo_user
5 pass = mongo_user_pwd
6 db = rest
```

## Adding Services

For each REST service that is to be integrated into the MuG REST service should have the relevant URL and name stored within a registry.json file located in the mg-rest-service directory:

```
1 {"registry" : [
2   {"name" : "DMP", "url" : "http://127.0.0.1:5001/api/dmp/ping"},
3   {"name" : "", "url" : ""}
4 ]}
```

## Starting the service

```
1 nohup ${PATH_2_PYENV}/versions/2.7.12/envs/mg-rest-service/bin/waitress-serve --
  ↪listen=127.0.0.1:5000 rest.app:app &
```

## Apache Config

This is dependent on the version that you are running.

In Apache 2.2 the *<Location>* tag for the */api* server need to come last in the list of services so that it is not over written

```
1 <VirtualHost *:80>
2   ServerName www.example.com
3   ServerAlias rest-mug.example.com
4   ServerAlias rest-mug
5   <Proxy *>
6     Order deny,allow
7     Allow from all
8   </Proxy>
9   ProxyRequests Off
10  ProxyPreserveHost On
11  <Location /api/dmp>
12    ProxyPass http://127.0.0.1:5001/api/dmp
13    ProxyPassReverse http://127.0.0.1:5001/api/dmp
14  </Location>
15  <Location /api/adjacency>
16    ProxyPass http://127.0.0.1:5002/api/adjacency
17    ProxyPassReverse http://127.0.0.1:5002/api/adjacency
18  </Location>
19  <Location /api>
20    ProxyPass http://127.0.0.1:5000/api
21    ProxyPassReverse http://127.0.0.1:5000/api
22  </Location>
23  RequestHeader set X-Forwarded-Proto "http"
24 </VirtualHost>
```





### Methods

#### **class** `rest.app.EndPoints`

Class to handle the http requests for returning information about the end points

#### **static** `get ()`

GET list all end points

List of all of the end points for the current service.

#### **Example**

```
1 curl -X GET http://localhost:5001/mug/api
```

#### **class** `rest.app.Ping`

Class to handle the http requests to ping a service

#### **static** `get ()`

GET Status

List the current status of the service along with the relevant information about the version.

#### **Example**

```
1 curl -X GET http://localhost:5001/mug/api/ping
```



## CHAPTER 3

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### Architectural Decision Record (ADR)

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