



eYRC 2021-22: Agri Bot (AB)

Load Parameters using YAML file

In this section we will learn how to load your own parameters in ROS Parameter Server using a YAML File.

Steps

1. Navigate to `pkg_ros_basics`.

```
cd ~/catkin_ws/src/pkg_ros_basics
```



OR

```
roscd pkg_ros_basics
```



NOTE: `roscd` will work only if you have sourced `setup.bash` of your catkin workspace.

2. Create a `config` folder for your Python scripts and navigate into the folder.

```
mkdir config  
cd config
```



3. Create a configuration YAML file called `config_my.yaml`.

```
touch config_my.yaml
```



4. Open the script in any text-editor and start editing.

```
gedit config_my.yaml
```



5. Now fill your config file.

```
# Comment: my_config.yaml Configuration
details:
  name:
    first: "Hisenberg" # First Name
    last: "White" # Last Name

  contact:
    address: "XYZ Street, XYZ" # Address
    phone: 77777 # Contact
```



- ROS Build system will create a Python Dictionary called `details`.
- This dictionary will have two keys,

1. Dictionary `name`

2. Dictionary `contact`

- In your ROS Node you can use `rospy` to get parameters stored in this `config_my` dictionary.

```
param_config_my = rospy.get_param('details')  
  
first_name = param_config_my['name']['first']  
phone = param_config_my['contact']['phone']
```



6. Now if you want to load the parameters defined in the YAML file you have to first start the ROS Parameter Server.

Open up a new terminal and enter the following.

```
roscore
```



7. Now load your parameters.

```
rosparam load config_my.yaml
```



8. Now get the list of parameters loaded in your ROS Parameter Server.

```
rosparam list
```



Output:

```
/details/contact/address  
/details/contact/phone  
/details/last  
/details/name/first  
/roscdistro  
/roslaunch/uris/host_pc__37763  
/rosversion  
/run_id
```



Here you can see the first four parameters are loaded from our `config_my.yaml` file.

9. Now to view the content of any parameter do the following.

```
rosparam get /details/contact/phone
```



Output:

```
77777
```



This is the value which we defined in the `config_my.yaml` file.