



GoDetect™ version 8

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Subject: GoDetect™ version 8 Installations Instructions

I. Introduction

Version 8 of GoDetect™ is based on machine vision: the same technology used by autonomous vehicles. Images are classified per a gas analyzer's results and then used to generate a model that can accurately assess compiled reaction images to determine a reaction level: No reaction, Minor, Significant, Extreme that correspond to <1ppm, 1-5ppm, 5-20ppm, and >20ppm of carbon monoxide given off, respectfully. Obviously, inorganic compounds will not give off CO and thus were not used in the training of the model however, inorganic compounds will give off light which is what the algorithm is focused on and thus can still indicate a reaction level accordingly. Further details are in the web app and in the release notes (emailed to you, if not, give us a call at 801-567-0456).

Below are the instructions for installing or updating to version 8+ of GoDetect™:

1. Install Docker
2. Pull the GoDetect image from the smswj repository
3. Run GoDetect

1 Install Docker

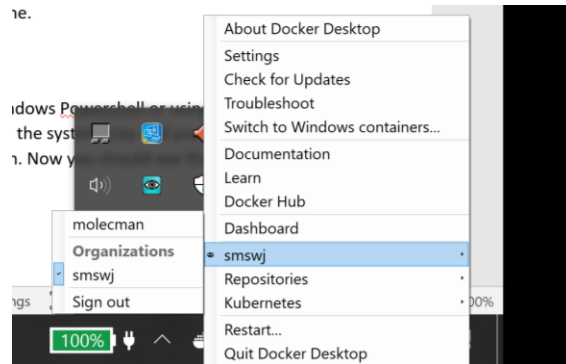
Follow the instructions on the Docker site (<https://www.docker.com/products/docker-desktop>) to download and install Docker Desktop for Windows on your machine. Start Docker. Help and instructions on installing the Docker program is on their website (www.docker.com). You will need to get an account with Docker with a username and password. Note that the hyper-v service must be enabled per the instructions on running Docker Desktop in Windows.

After you have installed Docker and have it running (mousing over the whale icon in the system tray should show 'Docker Desktop is running'), contact us at 801-567-0456 to obtain the credentials to the private GoDetect repository online so that you can complete the next step.

2 Pull GoDetect™ v8 Image

If you already have GoDetect running and this is simply updating your version to the latest, make sure to backup your GoDetectData folder (C:/Users/yourname/GoDetectData). Simply copy the folder and paste it somewhere you can find it. Also, backup the GD_test.db by typing into the windows powershell prompt: `docker cp gdetect:/app/GD_test.db GoDetectData/GD_test_backup.db`. Verify that the GD_test_backup.db is now in the GoDetectData folder.

After typing 'docker login' and entering your credentials using Windows Powershell or using the login feature in the system tray for Docker (whale icon with containers on top), click on your username in the system tray and you should see smswj under the organizations list. Click on the smswj organization. Now you should see that the smswj is checked as shown below.



Now simply type 'docker pull smswj/godetect' into the Windows Powershell window. You should see that the files necessary are being pulled and downloaded. When finished, you should also see that there is a message stating that the event was successful.

3 Run GoDetect™ v8

Once the smswj/godetect image has been pulled from the smswj repository, you can run GoDetect in a web browser (GoDetect is designed for Chrome, other browsers are not supported). In the Windows Powershell, type 'docker run -d -v C:/Users/yourusername/GoDetectData:/app/GoDetectData -p 80:80 --name gdetect smswj/godetect'.

- d stands for detach, in that the container runs in the background

- v is the volume mount, first is listed the home directory (C:/Users/name/etc.) and then the path to the data volume where the files will be saved from the output from PCC and testing.

- p represents the publish to the port so that the default port (80 for local host) can be accessed in the browser at "localhost"

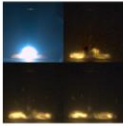
- name is the name of the container from the smswj/godetect image. To get a list of images type 'docker image ls' into a windows powershell. The container name can be anything but please use 'gdetect'.

If you already had a gdetect container running, stop it (docker stop gdetect) and remove it (docker rm gdetect) prior to typing in the above run command.

Once you have a running container per the above command, simply open Chrome and type 'localhost' into the address bar. You should see a page similar to that shown below.



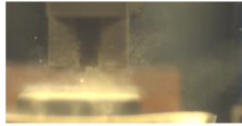
GoDetect™ ESD



[Instructions »](#)

Use a Phantom camera and the software to automatically determine if a reaction occurred using the state-of-the-art

GoDetect™ View



[Instructions »](#)

Use the viewer to choose if a reaction occurred using a Phantom camera with an ABL Friction, MBOM Impact, or any

If you backed up the database from a previous version 8 of GoDetect prior to updating, it may be necessary to copy the backed-up database back into the container with 'docker cp GoDetectData/GD_test_backup.db gdetect:/app/GD_test.db'.

4 Troubleshooting

If you have trouble with any of the above steps, please complete the following:

- Please read all the instructions and make sure you haven't mistakenly typed something wrong or not completed a previous step. If you have a problem with Step 1, reach out to your IT group as there may be a system level setting preventing Docker to install and/run. There are also many useful resources on the web where you can simply type the error message into Google and solutions are there provided.
- Please also read the release notes and be familiar with all that is in them.
- If you get an error like this when you click on the detection link under ESD or View:

500 Server Error

FileNotFoundError: [Errno 2] No such file or directory:

Traceback

File /app/main.py, line 278, in `get_esd_tree`

```
275.
def get_esd_tree(): #tree is a dictionary of the machines with arrays of dictionaries
276.     tree = [] #using a dictionary is easier but the order is not preserved.
277.     esd_path = os.path.join(os.getcwd(), 'GoDetectData', 'ABL ESD', '') #base path
278.     substance_list = sorted([fds for fds in os.listdir(esd_path) if os.path.isd
279.     for sub in substance_list:
280.         path_s = esd_path + sub
281.         tree.append([sub,sorted([fn for fn in os.listdir(path_s) if re.search(r
```

File /app/main.py, line 125, in `esdpage`

First try the following:

Copy the GoDetect folder over to the Users/username directory with: 'docker cp gdetect:/app/GoDetectData GoDetectData'. Verify that files were copied from the container to the host by checking that C:/Users/username/GoDetectData exists and there's data in it including folders named ABL ESD and View.

If that didn't work try:

Make a new directory with the name 'ABL ESD' in your C:/Users/username/GoDetectData folder and then inside that create a folder with a material name such as 'PETN' and then inside that PETN folder, place a cine file that you have recorded. Simply reload the page and you should then see the normal detection page. You may have to do the same thing if there's a similar error with the View, Detection link but you'll have to make a 'View' folder inside GoDetectData with then a machine folder inside the 'View' folder like 'ABL Friction' and then a substance folder inside that like 'PETN' and then an example cine file inside that.

- Following completion of the above steps, if there are still problems, you can reach out to us at 801-567-0456.