



Schweizerische Eidgenossenschaft
Confédération suisse
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Swiss Confederation

Federal Department of Home Affairs FDHA
Federal Office of Meteorology and Climatology **MeteoSwiss**

Exercise Tools Intro

Binder, Jupyter Lab & Docker Fallback



Binder - mybinder.org

“mybinder.org is an online service for building and sharing reproducible and interactive computational environments from online repositories. “

- <https://mybinder.readthedocs.io/en/latest/introduction.html#what-is-mybinder-org>

- We will use mybinder.org for the exercises
- Gives us free, public access to jupyter lab notebooks
- Mybinder.org supports running docker images
 - Gives us full control over the environment (dependencies etc)
- All you have to do is open our link in the browser 😊
- (hopefully we will be spared by technical issues)



Binder - Acknowledgment

At this point, a **big thank you** to everyone behind the mybinder.org deployment!





Binder - Usage

- Every instance gets min 1GB RAM (up to 2GB)
- Only CPUs (no GPUs)
- Please be patient with the startup time and when running code
 - Startup times can reach 5min - 10min
 - After that, you should probably try to start a new instance
 - Hopefully, on average 1min - 2min
- Please open only one single instance in your browser
 - There is a limit on the available concurrent sessions
 - Session will timeout after 10min of inactivity
 - Can be shut-down manually: File -> Shut Down -> *Confirm*
- (you can use docker to run the container locally, see fallback slides later)



Binder - Link

<https://cutt.ly/dusk-dawn-notebook>



Docker - Fallback

```
docker run -itp 127.0.0.1:8888:8888/tcp \  
  dawnico/dusk-dawn-notebook:bc6f0400df9b \  
  jupyter lab --ip 0.0.0.0
```

- Copy the whole multi-line command
- Two links will be printed in the terminal
 - The one with 127.0.0.1 should work ✓
 - The other one won't work ✗
- Errors/Warnings in the output can mostly be ignored



Jupyter Lab

- Intro on Wednesday afternoon
- Docs: <https://jupyterlab.readthedocs.io/en/latest/>



Video Codecs

- Some exercises play a short animation when you did them right
- These videos are html5 embedded and use the h264 codec
- *Should* be fine on most systems
 - If there are problems use Google Chrome
- Test [Here](#)
 - Scrolling sine wave should be visible in the middle of the page



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