



QUICK GUIDE – RUN EMD-WRF ON-DEMAND MESOSCALE CALCULATION

Purpose:

This quick guide shows you how to request an EMD-WRF On-Demand Mesoscale calculation.

The EMD-WRF On-Demand (OD) data-services are available with global spatial coverage and offer a high-resolution mesoscale time series anywhere in the world. Please find more here: [EMD-WRF OD and Custom-Area](#).

1. PRICE STRUCTURE AND MESO CREDITS

No special modules have to be purchased in order to run EMD-WRF OD calculations. The calculations are paid as requested using EMDs “meso credits”. One meso credit gives you 1 month of hourly time series data. Thus, a 10-year time series run costs 120 meso credits (12 months * 10 years).

The meso credits are purchased by contacting sales@emd.dk or by [ordering online](#).

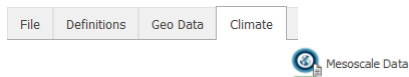
2. RUNNING CALCULATIONS

Requesting EMD-WRF OD calculations is very simple. You only need to specify:

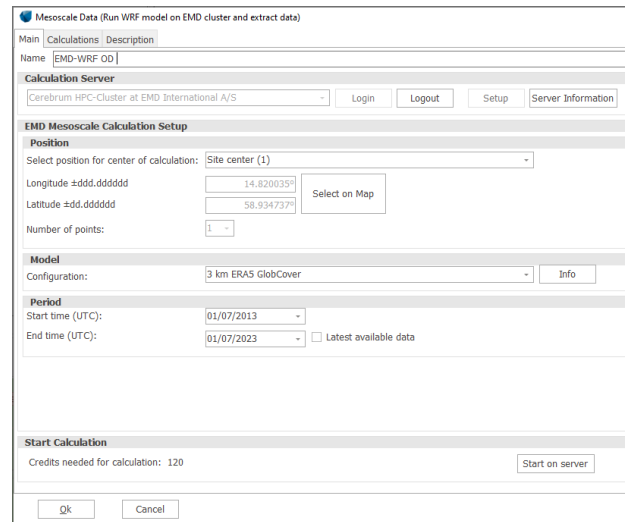
- ✓ Geographical location
- ✓ Time period
- ✓ Boundary data

CALCULATION SETUP

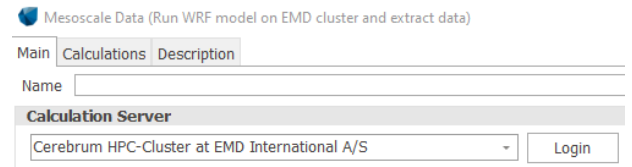
To start a new calculation, you go to Mesoscale Data under the Climate tab.



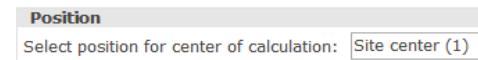
A calculation setup window will open, as seen next:



Start by giving the calculation a name and press the Login button to connect to the cluster at EMD:

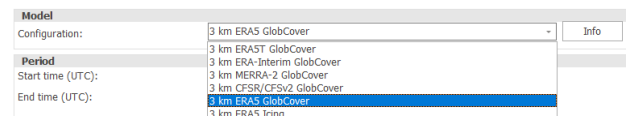


Select the position of the calculation:



The position can be defined based on another object in windPRO, it can be manually entered (user defined) or you can select the position on the map by clicking on it.

Select the model configuration as seen below. By clicking the Info button to the right you get a brief summary of the configuration, and more information can be found [here](#) or in this [Technical Note](#).



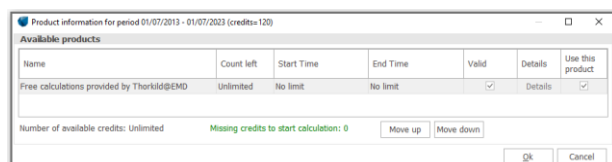
The last thing to define before starting the calculation is the period you want. If you have measurements on the

Quick Guide – PARK with MESO data

site, you can start by running the period where you have data and then later on you can request the full period you need (10-20 years).

STARTING THE CALCULATION

The calculation is started on the computer cluster at EMD by pressing the “Start on Server” button, giving you the following window:



For this example, you can see that it requires 120 meso credits. Once you are ready press the “Ok” button to start the calculation. You will see one more confirmation dialog before the calculation is actually started. Simply click “Yes” if you are sure you want to start the calculation. When the calculation has started you will see the “Calculations” tab showing the actual calculation and the estimated completion time for the job. Click “Ok” and save the project.

DOWNLOADING THE RESULTS

You will receive an e-mail when the job is completed, and the results are ready for download in windPRO. In your project find the MesoScaleData calculation and open it.

On the “Calculations” tab you should see the calculation you started and the button “Download results” should now be enabled. Click the button to download the results from the server. After the download completes the results are added as a Meteo object in the windPRO project.

3. DATA INCLUDED IN THE RESULTS

The main results are:

- ✓ Wind speed, direction and turbulence at 10, 25, 50, 75, 100, 150 and 200 meters.
- ✓ The temperature at 2 and 100 meters.
- ✓ Detailed solar radiation
- ✓ Surface pressure, humidity, precipitation, visibility, cloud cover and more.