

Interactive comment on “WRF4G: WRF experiment management made simple” by V. Fernández-Quiruelas et al.

Anonymous Referee #4

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The paper describes WRF4G, which is a tool to facilitate the running of multiple WRF simulations, including pre and post processing steps, in a single workflow. A tool that provides a consistent, reproducible workflow that is not specific to a single institution or computing resource is of significant value to the growing WRF user base. As such, I feel that this paper does address a relevant scientific question within the scope of this publication.

However, I have a few comments regarding the overall clarity of the manuscript.

1. I don't think that the authors adequately differentiate WRF4G from the existing management tools available. While other workflow managers are discussed on page 6554, lines 5-17, this comparison needs to go into further detail, particularly with respect to the WRFPortal, which appears to be the most widely used workflow manager for WRF.

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2. In the abstract the authors refer to the fact that WRF4G can be extended to other models however there is little discussion on this in the paper itself. I suggest that this is either removed from the abstract or discussed in more detail in the paper.

3. The paper mentions post processing, which is a major component of any WRF workflow, in the briefest of terms. Discussion on how post processing is done, and what options are available is needed.

4. The paper also mentions the monitoring capabilities of WRF4G however these are not discussed in any detail. I suggest that the section “Managing experiments with WRF4G” be expanded to include a discussion on the monitoring capabilities. Also, Figure 6 appears to be designed to highlight to the reader some of the monitoring/management capabilities of WRF4G. I suggest that a better example, possibly showing multiple experiments on different CRs would better demonstrate the capabilities of the system.

5. Providing some quantification as to how WRF4G will benefit users would add value to this paper. For example while the case studies detail how to use WRF4G, they don't go into any detail as to how WRF4G has added value in that instance.

6. I think the Conclusion needs to be rewritten for clarity and fluency. For example:

“This leads to an enormous save of time and facilitates the access to new infrastructures with no additional overhead.”

The use of enormous in this instance does not help the reader quantify the benefit of using WRF4G.

Minor Comments: Page 6557 Line 9: “In this kind of experiments the sensitivity” should be experiment

Page 6557 Line 12: “A particular example are multi-physics ensembles” rephrase

Page 6557 Line 25-27: can these other options be easily changed using WRF4G?

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Page 6559 Line 4: "Regional climate simulations can use a computer resource during months to produce 5 several decades of simulated atmospheric states" This sentence does not make sense to me.

Page 6559 Line 5: "huge" Please quantify this statement. Suggest using some examples from previous experiments.

Page 6559 Line 8: "Since a computer resource can hardly be available uninterruptedly for several months, WRF (and all models) has the possibility to be restarted from special 10 files which are created according to the user needs." Please rephrase.

Page 6569 Line 13-22: You use the word restart to mean two different things in this paragraph. I suggest you rephrase this sentence. Consider using the term "single initialization" for this type of experiment.

Interactive comment on Geosci. Model Dev. Discuss., 8, 6551, 2015.