

Aug 1, 2011 11am PDT

BioEarth Working Group #I Meeting (Cyberinfrastructure and Modeling Working Group)

Location: Sloan 146

For Audio: teleconferencing at 509-335-4700, Meeting ID # 7081

Screen Sharing during Seminar: Skype VideoCall. Email me (jcadam@wsu.edu) your skype name and I will add you to the session. For those of you without skype access, we will email out the PPT presentation a few minutes in advance of the meeting. *Please keep your skype sessions on mute as audio will be via the teleconferencing system.*

People involved in WG #1: Adam, Chung, Evans, Guenther, Harrison, Ananth K., Lamb, R.Leung, Stockle, Tague, Vaughan (all faculty, postdocs, students invited as well; students involved in modeling/cyberinfrastructure are strongly encouraged to attend)

Agenda:

1. Announcements, reminders, logistics
 - a. Reminder to Everyone: Fill out doodle poll for fall semester meetings:
<http://doodle.com/gcrk4t8e43wgwp24>
 - b. Reminder to Faculty: Fill out doodle poll for scheduling half-day PI Meeting:
<http://doodle.com/4itpiymyi84yqe2i>
 - c. Reminder to select individuals: Provide model-specific webpage material, e.g.,
http://www.cereo.wsu.edu/bioearth/vic_model.html
 - d. Reminder to select individuals: Provide models for sequential runs (see Joe Vaughan's request by email, attached to this agenda)
 - e. Reminder to Students: provide your material to Jen Hinds (jhinds@wsu.edu) for our webpage (<http://www.cereo.wsu.edu/bioearth/students.html>)
 - f. Reminder: AGU abstracts due Aug 4 (Consider submitting to GC08 session on earth system modeling)
 - g. Announcement: all meetings notes and PPTs are being posted on our webpage:
<http://www.cereo.wsu.edu/bioearth/meetings.html>
 - h. Question: next WG I meeting is Aug 15, although Jenny will be out of town. Does the group want to have a meeting that day?
2. Go over meetings notes and milestones from July 18 WG I and July 25 steering committee meetings
3. Updates from individuals on progress towards milestones and decisions made since last meeting
4. Seminar: Weather Research and Forecasting (WRF) modeling: Serena Chung

Meeting Notes:

Participants: Faculty: Adam, Brady, Chen, Chung, Ananth K., Liu, Tague, Vaughan, Zhu;
Students: Anderson, Rajagopalan, Inna R.

1. Introductions: (See biosketches for 2 new postdoctoral scholars:
<http://www.cereo.wsu.edu/bioearth/biosketch.html>)
2. Decision: no WGI meeting on Aug 15. Next meeting will be Monday, Aug 29, time TBD.
(please fill out poll for Fall meeting scheduling)
3. WRF seminar (by Serena Chung; [attached](#)) discussions:
 - a. Terminology:
 - i. Diagnostic: derived from prognostic variables
 - ii. Prognostic: variables simulated during run
 - iii. Example: for horizontal wind, the wind vector (u,v) is prognostic, but windspeed (the square root of u^2 plus v^2) is diagnostic
 - b. Discussion on “paradigm gap” as presented in Robin Dennis (EPA) white paper entitled, “Improving air quality-ecosystem modeling: connections to EPA/ORD’s ecosystem research program” – [attached](#)
 - i. Meteorological models are based on first principles with little calibration
 - ii. Terrestrial models are calibrated to match observations
 - iii. **Action Item:** hold a meeting to discuss calibration parameters on terrestrial side
 - c. WRF and parallelization
 - i. Ananth: Using MPI/OpenMP (i.e., hybrid parallelism) may end up giving better performance than just using MPI on machines like Aeolus or central cluster where there are numerous processors per node to reduce time in communicating between nodes on the network. But need to test this out.

From: Vaughan, Joseph K

Sent: Monday, June 27, 2011 9:20 AM

To: Adam, Jennifer C; Chung, Serena; Stockle, Claudio Osvaldo; Alex Guenther; christina tague; Leung, Lai-Yung (Ruby); Harrison, John; Evans, R. Dave

Cc: Jennifer Hinds; Kalyanaraman, Anantharaman; Lamb, Brian K

Subject: Cyber Infrastructure : We need to collect the BioEarth codes, test data and benchmark data in a central location/system

Importance: High

Hello,

This email particularly addresses our project members who are responsible for contributing codes to the BioEarth model integration effort.

We need to begin acquiring your codes (including scripts),
and data for testing those codes (once they are built),
and data for benchmarking performance (if different from test data),
in a central location.

Jim Kuszniir has set up a secure ftp account on aeolus to receive these codes and data.

Our secure FTP site can be accessed from a linux command line with:

sftp bioearth@aeolus.wsu.edu

<If you get this question, then answer 'yes' to it.

The authenticity of host 'aeolus.wsu.edu (198.17.13.1)' can't be established.

RSA key fingerprint is 64:a6:16:40:36:fe:8a:f7:97:33:82:cd:c0:29:5a:28.

Are you sure you want to continue connecting (yes/no)? yes>

<enter the password> **For security we're not sending the password — please call me at 509-335-2832.**

Once signed in, you can see the available sftp commands by entering '?' here is a short list:

help gives simple listing of commands and syntax. 'help' takes no arguments! Same as '?'

mkdir <dirname> for creating a directory

cd <dirname> for moving into a directory

cd .. For moving up to parent directory

lcd <dirname> or lcd .. for changing directory location on your home system

put <filename> [<destination-filename>] for copying a file to the ftp site.

rm <filename> Deletes file from sftp site

! Escapes the sftp shell, allowing entry of commands local to your host system.

mput <filename-w-wildcard> (this command doesn't show up in help, but it works! Also, put

now accepts <filename-w-wildcard>

Once into sftp, create a directory for your storage and cd into it. I suggest using either the model name or your last name.

For windows users, several windows packages support sftp. Look at puTTY and Filezila, perhaps.

Alternatives to SFTP? Call me.

Quality Assurance:

To insure that codes and data are transferred correctly, we wish to use the md5sum (checksum) utility in Linux. If you are unable to access this, please send your data/codes anyway.

If you cannot use md5sum, please discuss alternatives with us so we can check on supporting your choice at the aeolus end.

Please create and sftp to us one or more 'tarballs'.

So, here are the steps that I'd suggest.

Assuming you are in a Linux system, please tar up codes and data, and then run md5sum on each tarball.

1) Tar up multiple directories at once, or else tar up codes and data separately, depending on how big they are.

```
tar cvf model.tar <model-dir1> <model_dir2> <test_data_dir> <benchmark_data_dir>
or
tar cvf model.tar <model-dir1> <model_dir2>
tar cvf test_data.tar <test_data_dir>
tar cvf benchmark.tar <benchmark_data_dir>
```

2) Then zip up the tar files with gzip:
gzip *tar

3) Then run md5sum on these (one or more) tarballs (*.tar.gz files)
md5sum *.tar.gz > md5sum.log
and then sftp us both the tar.gz files and the associated md5sum.log file.

The log file will show the md5sum checksum for each file found by the target of the md5sum command and look something like:

2037ec679d7f91c1c7e36ecf38a97cd3 junk2.tar.gz
2037ec679d7f91c1c7e36ecf38a97cd3 junk.tar.gz

4) Sftp into aeolus and 'put' both the tarballs and the md5sum logs on aeolus. Then please email me at jvaughan@wsu.edu (to let me know there is something new there).

Lastly, I'm happy to talk about anything discussed here.

Hope to see your code and data soon.

Thanks,

Joe

Joseph K. Vaughan, Ph.D.
Laboratory for Atmospheric Research
Department of Civil and Environmental Engineering
Washington State University
Pullman, WA 99164-2910
509-335-2832
jvaughan@wsu.edu

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