NCAR UCAR

Ben Foster <foster@ucar.edu>

Latest version of TIE-GCM

7 messages

Cnossen, Ingrid <inos@bas.ac.uk>   Tue, Jul 14, 2015 at 5:20 AM
To: Ben Foster <foster@ucar.edu>

Hi Ben,

I'd like to do a new run with the latest version of the TIE-GCM. I found tiegcm_r1109 online, which I have downloaded. Is that the most recent version? I am running into problems with building this on our local cluster. I think it is to do with ESMF, which seems to be new. Do you have any pointers? I've copied the output from an attempt to do a default run below.

Thanks,

Ingrid

tiegcm-scihub.job:

  Begin execution at Tue Jul 14 12:16:14 BST 2015

  Current working directory: /data/scihub-users/inos/src/TIE-GCM/tiegcm_r1109/scripts

  System: Linux bslscihub-ws5 2.6.18-348.3.1.el5 #1 SMP Mon Mar 11 15:43:13 EDT 2013 x86_64 x86_64 x86_64 GNU/Linux

  Model directory: /data/scihub-users/inos/src/TIE-GCM/tiegcm_r1109 (SVN revision exported)

  Exec directory: /data/scihub-users/inos/modeldata/tiegcm_r1109/test1

  Source directory: /data/scihub-users/inos/src/TIE-GCM/tiegcm_r1109/src

  Make machine file: Make.intel_scihub

  Namelist input: /data/scihub-users/inos/src/TIE-GCM/tiegcm_r1109/scripts/tiegcm_default.inp

  Model resolution: 5.0

  Debug flag: FALSE

Switching defs.h for model resolution 5.0

Begin building tiegcm_r1109 in /data/scihub-users/inos/modeldata/tiegcm_r1109/test1

Makefile:43: /esmf.mk: No such file or directory

gmake: *** No rule to make target `/esmf.mk'. Stop.

>>> Error return from gmake all

[1]   Exit 1   tiegcm-scihub.job

Ben Foster <foster@ucar.edu>   Tue, Jul 14, 2015 at 9:53 AM
To: "Cnossen, Ingrid" <inos@bas.ac.uk>, Joe McInerney <joemci@ucar.edu>

Hi Ingrid,

The most recent tiegcm source code is always the trunk, which you can check
out like this:

svn checkout $SVN/tiegcm/trunk tiegcm_trunk

(I assume you are using the proxy address). Of course, you will still have
the same problem with ESMF. This is a complication that can be confusing.
Here, we the Intel compiler with an Intel-built version of
ESMF (ESMF_5_2_0rp1_beta_snapshot_21). I am currently working on b
uilding it with the PGI compiler, but its not working yet. So my first question is
do you have the Intel compiler (ifort), and a version of esmf that was built by
the Intel compiler?

The key is, of course, the platform-specific file Make.intel_hao64, and the Makefile
itself. I see you are using Make.intel_scihub, so I assume this file is modified for
your environment, and has a path for LIB_ESMF. The esmf.mk file is a site-specific
file detailing how esmf was built. In our case, it is in
/home/tgcm/esmf/ESMF_5_2_0rp1_beta_snapshot_21/lib/libO/Linux.intel.64.intelmpi.hao/
Check to see if you have a similar file at your LIB_ESMF location.

It looks like you do have the intel compiler, so I'm wondering if you could copy
our ESMF lib, and use the settings in Make.intel_hao64. Keep me informed, and
if we have to I will put you in touch with the ESMF person who has helped us in
the past.

--Ben

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Ben Foster
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303-497-1595

Cnossen, Ingrid <inos@bas.ac.uk>   Tue, Jul 14, 2015 at 10:49 AM
To: Ben Foster <foster@ucar.edu>

Hi Ben,

I tried initially to do an svn list like this: "svn list https://subversion.ucar.edu/tgcm", but got no reply. Perhaps this is outdated? I then found tiegcm_r1109 on http://download.hao.ucar.edu/pub/tgcm/ and got that version from there. You told me some time ago that this is an update from version 1.95, which I used till then.

I didn't know what ESMF was. I had assumed that it was part of the TIE-GCM (I figured it was maybe a new module), but I now realize that it is a separate software package that I need to install or download. We do not have it on our cluster. I have the intel compiler, but have not yet downloaded ESMF. But perhaps it would simply work with your ESMF lib. Could you send it to me so I can try?

I previously modified the file Make.intel_hao64 for our cluster (scihub) when running TIEGCM1.95. However, I've now realized that Make.intel_hao64 has changed since then and I need to add those changes to my modified version for scihub, and point to the location of LIB_ESMF on our system once I have it.

Ingrid

From: Ben Foster [mailto:foster@ucar.edu]
Sent: 14 July 2015 16:53
To: Cnossen, Ingrid; Joe McInerney
Subject: Re: Latest version of TIE-GCM

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Ben Foster <foster@ucar.edu>   Tue, Jul 14, 2015 at 2:34 PM
To: "Cnossen, Ingrid" <inos@bas.ac.uk>, Joe McInerney <joemci@ucar.edu>

Ingrid, if you have access to the tgcm repository, the svn list command should have worked, so I suspect you never got access, or don't have your pw. I have written to the CISL people that host the repository, so Gary Studwell may try to reach you by email if you do not already have access.

In any case, when you do have access to the repo, the command to check
out the tiegcm trunk code will be:

svn checkout https://proxy.subversion.ucar.edu/tgcm/tiegcm/trunk tiegcm_trunk
This should check the code out into a directory called tiegcm_trunk.

Regarding ESMF, do you still have an account at hao? If so, you could
copy the directory /home/tgcm/esmf/ESMF_5_2_0rp1_beta_snapshot_21
If not, (and if you do not have a login on ys anymore), let me know and I
will try putting it on my google drive and send you a link, but I have a feeling
it could take quite a while to download it, and I'm not sure if it would be compatible
with whatever platform you are running on. Do you have a sysadmin who could
help you build ESMF with Intel?

--Ben

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Cnossen, Ingrid <inos@bas.ac.uk>   Wed, Jul 15, 2015 at 7:46 AM
To: Ben Foster <foster@ucar.edu>

Hi Ben,

I did get an e-mail from Gary Studwell and he set up access for me. I've checked out the latest version now. I
was also able to log into one of the HAO computers and copied across the ESMF directory. Directly using
your build didn't work though, so I built the library myself, following the instructions in your README file,
but modifying them for our cluster. The build was successful, and I'm now able to build the TIE-GCM as well,
although I had to remove the –lcurl library from LIBS in my Make.intel_scihub file. I don't have that library,
and I built TIEGCM1.95 without it as well in the past, so I guess it's not critical. I'm now doing a default test
run with the updated TIEGCM and that seems to be progressing normally, so I think I'm all set. Thanks for
your help!

-Ingrid

From: Ben Foster [mailto:foster@ucar.edu]
Sent: 14 July 2015 21:34

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Ben Foster <foster@ucar.edu>   Wed, Jul 15, 2015 at 11:40 AM
To: "Cnossen, Ingrid" <inos@bas.ac.uk>, Joe McInerney <joemci@ucar.edu>

Ingrid, Wow, that's great, way to go! Maybe ESMF was loading the curl lib
for you. Thanks for persisting on this, it really paid off - you know how hard
it is to debug these things via email!   Please let me know which
version of ESMF you built, since I should also update our version.
I will also remember that you used my README on building ESMF, I will
include that in the User's Guide in later tags.

Also good that you now have an svn working copy. If you get email
notification of commits to the trunk, you can decide if you want to update
your own copy or not. If you decide to update, just give the command
"svn update" in your working copy. To see if the repo has been changed
wrt to your working copy, give the command "svn stat -u".

--Ben

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Cnossen, Ingrid <inos@bas.ac.uk>   Wed, Jul 15, 2015 at 11:50 AM
To: Ben Foster <foster@ucar.edu>

Hi Ben,

It wasn't too hard actually – I was expecting much more trouble J. I built the same version of ESMF you have;
I used the directory structure I had already copied across. Your README file was definitely handy, because it
quickly told me about the key steps. So I just added the relevant ESMF variables to my .cshrc file, made a
new build_rules.mk file, slightly adapted from yours, and ran gmake. That worked without any problems.

Cheers,

Ingrid

From: Ben Foster [mailto:foster@ucar.edu]
Sent: 15 July 2015 18:40

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