```
  Spring 10 Documentation
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
  1/12
  To Do:  Finish and print poster for Duke conference
          make slides(8 or so) for IT presentation
          put CRY, and GEANT4 on computer
          Get FLTECH domain on photon


  CRY: was workng on it last semester and coming across this error:
               found online, clicked on it when finished downloading, opened archive manager, then i
  clicked extract.
                         opened up terminal, found it, read the readme. first step should be 'make'
                              wasn't working. simple solution apparantly pretty common to ubuntu,
  just ln -s /bin/bash to /bin/sh and i rmvd the /bin/sh file that was there and moved it to my folder
  (just in case!)
                              now would attempt to make but running into a new problem:
                                   g++ -I. -c -o CRY AbsFunction.p Cry absfunction.cc
                                   in constructior.....
                                          error: 'strcmp' was not declared in this scope
                                          error: 'atof was not declared in this scope
                  Might need g++ 3.4.4 compiler...edit Makefile.common to change this
                  Update: looks like thats not the problem. i tried it with gcc but the same error
  Put on Gluon:
          microsoft office with EVERYTHING esp publisher
          root
          jas3 (ida)


  1/13
  Emailed Jennifer about Fltech domain on Photon, its already working on electron.
  Contacted Tech Support for Microsoft office on Gluon, it needs to be tagged first. waiting for dr.
  hohlmann.
  Working on downloading root and Ida onto gluon.
          got root on there
          put java on there
          and jas3 instead of ida
          and heprapp although its not accessible to everyone
  a note on installing root
          was missing two dll files. just had to download them and put them in the /bin file for root.
  downloaded them from the internet, extracted and  put
          one in C:\Windows\system32 and then copied and put the other on root directly


  1/14
  Get both computers tagged, get microsoft on it
          Called them, they said that if it doesnt have a serial number they cant help us. but to email
  them the problem....
  check that heprapp is accessible to everyone
          Done: its located in C:\Documents and Settings\ All users\ Desktop  but to actually see it on
  your desktop just copy paste it.
  get CRY working on Electron
          scp 'd it from the cluster instead so it should work. i got a different error saying No rule
  to make target, based off
          an anonymous online tip for a different program but that got rid of that problem and now im
  back to the original one.
          GAH
          *searching for a different version on the cluster
  SLIDES
          began work. general outline and the pictures i want to use etc.



  1/19
  Cluster Fiesta Part 1:
  Things Patrick checks Dailyish
          whos logged on
          condor queue
          disk space
```

```
        sam tests: check if cms is working
        rsv:checks everything for OSG is working
```

CRY: found version 1.2 on cluster but not the tar.gz so brought over the whole thing and it looked
ok. did a make and something didnt work. did a make clean. did a make...
        and got the same error. unbelievable.

For next time: ask patrick again about CRY,
                recontact tech support about the tagging issue if they dont get back to johanna
laina,
                contact about fltech domain again,
                slides! show patrick what youve got going so far as an outline type of deal
                add conference to resume before you forget what you learned.

1/21
Cluster Fiesta Questions For Patrick:
        Contacts: name, position, best for help with?
        Different forums/newsletters should be subscribed to
        Daily cluster checks, what are you looking for
        Most likely fixes
Cluster Fiesta Ways to do things he mentioned:
        whos logged on : who shows user and when they logged in and stuff. users shows just their
name.
        condor queue:
        disk space: quota -v
        sam tests: (check if cms is working) :
        rsv (checks everything for OSG is working) : on Gratia website
CRY: suggestions run ./configure before running make, see if there is a configure.m file.
        probably missing a library

Fltech Domain:
        they took photon and electron and should be working on it...no word yet on when theyll return

Slides: Sent to Patrick for thoughts

For next time: Check on photon and electron if theyve been returned
                get CRY and Geant4 onto electron if its been returned
                get slides approved by patrick, then hohlmann
                begin looking up things for cluster that patrick mentioned

1/22
Domain: first one has been done, emailed info for the second. and hopefully theyll be back by monday!
        update! just got an email and he expects to be done in 20 minutes! no word on when hell be
bringing it by.
        woot! went to get them and they are now returned and functioning happily :) CRY might have
to wait until monday
        tho...only half an hour left.
Slides: making Patrick's suggestions then send to hohlmann.
        ?'s for Patrick:
                Slide 2: Kilobyte and are rest of units ok?
                do we need to explain how dd and Iperf work?
                explain the trials we ran or just the results?
                am i correctly explaining the changes we made?
                Slide 4: how many years has our cluster been operating? (august 2008? thats why we
chose that date? for charts)
                how many years before that was the old one operating?
                should i explain anything else about gratia?
                Slide 5/6: Is glow just some anonmous VO outside of us or is it one of the groups in
the department?
                Should i even keep the number of hours ran per day? is it because of christmas that
there is that huge chunk mising?

DOE annual report: is patricks thing but some of the info from my poster and fall 09 report might be
useful so ask him about that

```
1/26
To Do:
        Slides: final approval
        CRY and GEANT 4 on Electron
                tried a ./configure but there are no config files so obviusly it didnt work. same
error message after running make clean.
                guess im missing a library. lets look for it :)
                the fact that make returns error 1 means a target needs to be rebuilt. error 2 just
means an error was encountered.
        computer tagged
        Check on Video Card
        Evo on windows machine
                download went fine. audio doesnt exist.
                check bios for audio devices. then check device.


1/27
        Video Card
                tested newest video card in machine and it worked.
                newegg for a  PCI (refers to the part that hooks into the motherboard. the gold thing
slices cha know? )
                        VGA=D-Sub (blue hook up vs the white one which is DVI).
                machine is 2.5 years old.
                Sent hohlmann an email with the one I think we should get.
1/28
        EVO
                Downloaded CPUID to find out manufacturer/name of chipset which is who made the
onboard audio. then found drivers for that chipset.
                we'll see what happens... so the PCI Bridge thing now works. but the multimedia audio
controller is still missing the driver.
                trying to download drivers for the entire motherboard...


1/29
        EVO
                Its friday. i've got two hours. lets get this working!
                woot! done in half an hour!!! downloaded driver detective and i think it found the
driver and installed it? or simultaneously my downloading
                of an audio codec fixed it. either way it works now.
                to get all users to have it had to change permissions. added FLTECH-VISTA1 to users
and gave access. also moved it from
                my desktop to C:/Documents and Settings/All.Users. Windows/ Desktop
2/2
        To Do: email hohlmann about videocard
                work on CRY
                fill out outstanding student thing and leave open for printing at home
                send jo-jo my list of questions for patrick and ask for contributions, then
forward to patrick
                        CRAB?


2/3
        To Do: email hohlmann about videocard
                SPS: find out whos going for ameer
                        Alfred Menendez <amenendez2008@fit.edu>,-NO
                        Ameer Talha <atalha2009@fit.edu>,-Maybe
                        Andrea Citati <acitati2009@fit.edu>,
                        Johanna-Laina Fischer <jfischer2009@fit.edu>,-NO
                        Judson Benton Locke <lockej@fit.edu>,
                        Michael David Abercrombie <mabercro@fit.edu>,
                        Patrick Julian Ford <pford@fit.edu>, -NO
                CRY
                        hokay so all those c errors? basically had to find the .cc files and put in
the matching #include <cstring etc>
                        they were located in cry_1_5/src/ and cry_1_5/test
                        now working on...
                GEANT4!
                        downloaded from website, used archive manager. clicked extract
```

went to read installation guide, need a lot of programs installed before
so...
                              CLHEP:
              turn in time sheet, ask about last weeks

2/4
      turned in time sheet and outstanding student award
      GEANT4: Programs it claims to need...
            CLHEP: downloaded, extracted, ./configure, make, make check
                                          a couple erorrs but according to website
theyre not important
                  make install, and it looks like everythings good. nto exactly sure where to
put it... going to move it into the /bin with a soft link from the libraries folder

            DAWN: isnt working, stupid error. however HEPRAPP is on this computer and it
supposedly works as a substitute
            AIDA: i dont understnad the README
            JAS

            Patricks documentation says it needs
            Openmotif

2/5   continuing with the GEANT4 Collosus
            JAS3: wow that was easy. download, extract, ./jas3. it works! which means we have
java working too! moved it to /bin
            Openmotif: download, extract, ./configure, make
                  make returns lots of c type errors in a file locagted at openmotif-
2.3.0/lib/Xm/XmStrDefs
                  to go to specific lines in vi use 3733G which brings you to line 3733. G
brings you to last line, 0G brings you to first.
                  tried a lot of different versions. whole thing sucks. cant stand it. am
leaving 3 minutes early. take that world.
            AIDA:

2/10
GEANT4 Collusus
      according to one website we need: clhep 1.7.0
                        • geant4.4.0.tar.gz
                        • geant4.4.0.p01.tar.gz
                        • G4HepRep.tar.gz
                        • JAIDA-G4.tar.gz

      according to another all we need is clhep. now following directions at
      http://geant4.slac.stanford.edu/tutorial/installation/Geant4.9.3/Linux/Geant4_9_3_Linux_Insta
llation.htm#_What_are_the
            CLHEP part went exactly as they predicted. AWESOME SAUCE
            find XM and opengl

2/12   UGH! okay so alot of stuff happened and i had some good documentation but of course! my
computer shut down and didnt save...stupid battery.
      here's what I remember..
            used synaptic package manager to get a lot of stuff which fixed a lot of stuff.
            one other thing had to be found and was! in some place. i used find / -name "' for
it.
            the documentation on that website is great. and most everything seems to have gone on
without a problem. but there are some errors at end
      Gluon got magically tagged so we got office put on it. and i put a bunch of stuff including
root on photon too. and chrome on electron

Geant4!
      Finish with Geant4, check that errors are negligible or fix them and then finish
configuration.
      Error: warning: ignoring return value of '', declared with attribute warn unused result. FOR
LOTS OF DIF FILES
      Error: File Path, No such file or directory

        error: 'XP Conext' does not name a type

        BASICALLY every file attributed to Xm had an issue it looks like. /home/xfave/usr/X11R6,
pretty sure thats the one i had to type in instead of installing

        I think everythign is working...Have to get Ben to try it out.
        Here are the lines that have to be run each time added to .bashrc files
                export G4WORKDIR=/usr/local/geant4/g4work
                export LD_LIBRARY_PATH=/usr/local/CLHEP/lib
                source /usr/local/geant4/geant4.9.3/env.sh

    2/13
    To Do: FIX Geant4, sad face.
             New Project! Putting all the documentation on the twiki woot.

    at least the following:
    - All of Patrick's and your troubleshooting logs & notes from the last two years regarding any
    administrative and installation work that you have done on the cluster
    - Notes on crab usage,
            e.g. the recent "fix" that Samir found with help from other T3 folks to publish his data
    sets.
    - Instructions on how to obtain CMS accounts, Grid certificates etc.
    - Links to official monitoring tools locally and on OSG
    - Links to useful other web sites and twikis from the CMS Tier-3 group
    - Links to all presentations and posters that you guys have given on the cluster & grid at various
    conferences.
    - Links to all research reports that our group has written on the grid work,
            e.g. your report from last semester

    main page:

    our guides:
    how to use crab,
    how to obtain cms accounts
    how to get grid certs etc

    our work/publications:
    troubleshooting logs and notes: administrating and installation
    presentations and posters that we've given
    reports that we've written.

    other tools and links:
    Links to monitoring tools locally
    links to osg monitoring tools
    links to other useful websites, and twikis form cms tier grou

    2/17
    TWIKI:
            quickest way to do this (since I dont have a terminal on my computer): email files to self,
    then get on ubuntumachine . open them from email. scp them to cluster.
            then link to cluster on website.
            note: files must not only be on cluster but must be in /var/www/html
            note: permissions must allow anyone to read. i.e. chmod g=r filename or o=r (other) g is for
    group.
            note: have to sudo everything meh.
    Got a lot of documentation and both our posters

    2/18
    TWIKI: planning on getting all the logs on today along with Dr. Hohlmann's Requests:
            for the "Publications" category: Please add a link to all of our group's publications on MT
    simulation results
            that were run on the cluster. They are all on our HEP web site, so you can just create
            links to that site (and put them first in the cluster wiki list :)).
            Also, I have received the final version of Richie's thesis, which should go under "Theses" on

```
the HEP web site and on the cluster wiki.
              waitng till i have a copy of it..
```