

Cactus Configuration in Ekbek

Hola, parece que ya quedo bien configurado ekbek para correr en paralelo, les adjunto algunas instrucciones (trate de ponerlas en ingles para que Ryoji las entienda mejor, bueno esa es la idea) si hay alguna duda manden un correo.

Cactus is working well in ekbek, to do the configuration follow the next steps:

1) Write in ~/.cactus/config, only 3 commands:

```
LD_FLAGS = -L/usr/bin -lutil
```

```
MPI = LAM
```

```
LAM_DIR = /opt/lam/gnu
```

I don't test the configuration with HDF5 and Lapack yet.

2) Compile cactus.

3) Register the ssh key of the machines

```
[pablo@ekbek ~]$ ssh-agent $SHELL
```

```
[pablo@ekbek ~]$ ssh-add
```

```
Identity added: /home/pablo/.ssh/id_rsa (/home/pablo/.ssh/id_rsa)
```

run the script machines.sh:

```
[pablo@ekbek ~]$ cat machines.sh
```

```
#!/bin/bash
```

```
ssh compute-0-0.local echo $SHELL
```

```
ssh compute-0-1.local echo $SHELL
```

```
ssh compute-0-2.local echo $SHELL
```

```
ssh compute-0-3.local echo $SHELL
```

```
ssh compute-1-0.local echo $SHELL
```

```
ssh compute-1-1.local echo $SHELL
```

```
ssh compute-1-2.local echo $SHELL
```

```
ssh compute-1-3.local echo $SHELL
```

```
ssh compute-2-0.local echo $SHELL
```

```
ssh compute-2-1.local echo $SHELL
```

```
ssh compute-2-2.local echo $SHELL
```

```
ssh compute-2-3.local echo $SHELL
```

```
ssh compute-3-0.local echo $SHELL
```

```
ssh compute-3-1.local echo $SHELL
```

```
ssh compute-3-2.local echo $SHELL
```

```
ssh compute-3-3.local echo $SHELL
```

```
ssh compute-4-0.local echo $SHELL
```

```
ssh compute-4-2.local echo $SHELL
```

```
ssh compute-4-3.local echo $SHELL
```

```
ssh compute-5-0.local echo $SHELL
ssh compute-5-1.local echo $SHELL
ssh compute-6-0.local echo $SHELL
ssh compute-6-1.local echo $SHELL
ssh compute-7-0.local echo $SHELL
ssh compute-7-1.local echo $SHELL
ssh compute-7-2.local echo $SHELL
ssh compute-8-1.local echo $SHELL
```

Run the mpi daemon with the command: `lamboot bhost`.

`bhost` is a file with the machines to use, example:

```
[pablo@ekbek MPI]$ more bhost
#
# My lam nodes
#
ekbek
compute-0-0.local cpu=4
compute-0-1.local cpu=4
compute-0-2.local cpu=4
compute-0-3.local cpu=4
compute-1-0.local cpu=4
compute-1-1.local cpu=4
compute-1-2.local cpu=4
compute-1-3.local cpu=4
compute-2-0.local cpu=4
compute-2-1.local cpu=4
compute-2-2.local cpu=4
compute-2-3.local cpu=4
compute-3-0.local cpu=4
compute-3-1.local cpu=4
compute-3-2.local cpu=4
compute-3-3.local cpu=4
compute-4-0.local cpu=4
compute-4-2.local cpu=4
compute-4-3.local cpu=4
compute-5-0.local cpu=4
compute-5-1.local cpu=4
compute-6-0.local cpu=4
compute-6-1.local cpu=4
compute-7-0.local cpu=4
compute-7-1.local cpu=4
compute-7-2.local cpu=4
compute-8-1.local cpu=4
```

if mpi are working correctly, then you must see:

```
[pablo@ekbek MPI]$ lamboot bhost
```

LAM 7.1.1/MPI 2 C++/ROMIO - Indiana University

it take some time, be patient. To stop lam:

```
[pablo@ekbek MPI]$ lamhalt
```

4) To send a job, write a script, example:

```
[pablo@ekbek ~]$ cat run.sh
```

```
#!/bin/bash
```

```
MPI_DIR=/opt/lam/gnu/
```

```
CACTUS_DIR=/home/pablo/Cactus/
```

```
$MPI_DIR/bin/lamboot /home/pablo/bhost
```

```
$MPI_DIR/bin/mpirun -np 8 $CACTUS_DIR/exe/cactus_Oil.lam  
$CACTUS_DIR/exe/my_file.par
```

```
$MPI_DIR/bin/lamhalt
```

Test your script before send a big job

```
[pablo@ekbek ~]$ chmod +x run.sh
```

```
[pablo@ekbek ~]$ ./run.sh
```

If your script works correctly, you could send the job with:

```
[pablo@ekbek ~]$ date
```

```
Sat Apr 7 10:34:34 CDT 2007
```

```
[pablo@ekbek ~]$ at 10:38 < run.sh
```

```
job 16 at 2007-04-07 10:38
```

5)If you need to delete an already submitted job, you can use atrm given it's job id.

```
[pablo@ekbek ~]$ atq
```

```
17    2007-04-07 12:00 a pablo
```

```
[pablo@ekbek ~]$ atrm 17
```

6) To monitor jobs, in a web browser open the location
<http://ekbek.fis.cinvestav.mx>, you must give a user: grupoolin and password:
<>||!N-3kVe|<

Ryoji: your user is: ryoji, and your password R10_!T^ please change it as
Soon as possible

Miguel tu usuario es: malcubi y el password |^|1g3|_

Saludos.

Pablo