

Software ReadME

Written by Administrator
Tuesday, 09 November 2010 15:29 -

Id: Readme.AMS02.1st,v 1.59 2010/10/19 15:36:33 choutko Exp

-I. In the current version only AMS02-setup is supported.

Please refer to Readme.1st for AMS01 related questions.

0. Simulation tools:

both geant3 and geant4 are supported.

I. The following platforms are currently supported:

Linux gcc3.2.2 + icc/ifc v7.0
DEC/OSF1 cxx6.2++ (geant3 only)
Sun/SunOS5.7 Sun WorkShop 6 update 1 C++ 5.2

II. Software management:

cvs (Concurrent Version System)
see also in <http://wwwcn1.cern.ch/asd/cvs/index.html>

III. Programming languages:

- a) C++ (general framework, data structures, methods, algorithms, i/o etc)
- b) F77/F90 (algorithms only)
- c) Perl

IV. I/O

- a) RootFiles (DST default)
- b) Ntuples (DST obsolete)
- c) Oracle DB (bookkeeping etc)

V. Documentation

- a) AMS Home Page at <http://ams.cern.ch/AMS/analysis.html> -> SoftwareManagement

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and ref therein

- b) AMS02 software Home Page at <http://ams.cern.ch/AMS/Analysis/hpl3itp1/ams02.html>
- c) files in doc subdirectory of AMS directory tree (see VI. how to access)
- d) 00index.txt file in each subdirectory
- e) AMS02 Software Status Report in
http://ams.cern.ch/AMS/Analysis/hpl3itp1/ams02_ss_2003.pdf

VI. Access to AMS software

- i) Get an account on some ams computer (see VIII)
setenv Offline /afs/ams.cern.ch/Offline
for computers at cern cite
eg ams,pcamsf2,lxplus

for all other computers
provide ip address of the node(s)
to vitali.choutko@cern.ch
ro access to ams.cern.ch will be granted

source \$Offline/vdev/install/amsvar

setenv AMSWD /f2users/`whoami`

- a) As a user:

- ii) ams software is in \$Offline/vdev
- iii) source \$Offline/vdev/install/amsvar
to setup AMS related variables

- b) As a developer :

- ii) source \$Offline/vdev/install/amsvar
to setup AMS related variables

cvs co AMS
enter your afs password if required
To synchronize your local copy with cvs rep:
cvs update -d

To make the changes available to others (update CVS master rep) :
You should be a member of amsdev group on ams computers

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ask Vitaly.Choutko@cern.ch about the procedure
cvs commit

To add new files/directories:
cvs add file

To remove it:
rm file
cvs remove file

VII. Standalone version

- a. Standalone version is NOT supported, though moderate help for installation process is granted.
- b. Some knowledge of unix system commands is apriori assumed.

c. Hints to install AMS software on remote computer:

Case i: You have an afs installed
get an afs cern account group va
klog{.krb} -pr username -cell cern.ch (see man klog for the details, you may need type
pagsh{.krb} before in some cases)
setenv Offline /afs/cern.ch/exp/ams/Offline
source \$Offline/vdev/install/amsvar

Case ii: You don't have afs installed
Binaries available to download from
<http://pcamss0.cern.ch/cgi-bin/mon/download.o.cgi>

Third party libraries you may need to install

- i) cernlib
- ii) nag fortran library
- iii) libamsut (in /afs/cern.ch/exp/ams/Offline/lib)
- iv) in case of linux installation
/usr/bin/dirent.h should be replaced by
e.g. pcamsf2:/usr/bin/dirent.h

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VIII. Misc

a. Accounts

First you should be registered at CERN Human Resource Database.
No access to AMS (and CERN public machines can be given to non-authorized users).

If you are not registered at CERN HR :

- contact AMS secretariat - Laurence Barrin (laurence.barrin@cern.ch)

- fill CERN computing center User's registration form (available in CERN User's Office) and fax the form (41 22 767 7910) or send it via CERN internal mail to Alexandr Eline

If you already have an account at CERN and your primary group isn't 'VA' (AMS) or 'XV'(L3) specify explicitly what is you primary experiment/group.

To get local/afs accounts on ams computers

Alexandre Eline (e-mail : ams-support-computing@cern.ch).

b. Disk space

see a.

c. SoftWare/DataAccess

setenv Offline

/afs/ams.cern.ch/Offline computers at cern cite

eg ams,pcamsf2,lxplus

/afs/cern.ch/exp/ams/Offline all others

source \$Offline/vdev/install/amsvar

vdev version is in \$Offline/vdev (v4.00 build xx)

vdec/doc contains doc

d. Misc

i) you may need to override default shell limits to run offline program;
recommended settings are (in c-shell) for ams-geant3 (geant4)

limit stack 32000

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limit data 256000 (512000)

- ii) To creat Mgxint/dec-cxx cxx6.1 is needed (thanks to 6.2 bug)
- iii) daqevt.C must be compiled without -O switch with egcs compiler

e. AMS02 Data/MC may be retrieved via
<http://pcamsf0.cern.ch/cgi-bin/mon/rc.cgi> form.

f. Geant4 related stuff in doc/g4.doc

g. Job test examples are examples/*test*.job

IX AMS Event Display

To run an ams event display

```
source $Offline/vdev/install/amsvar  
$amsed02 ntuple_file
```

```
$amsedc root_file
```

X Documentation

<http://ams.cern.ch/AMS/Analysis/hpl3itp1/ams02.html>

Comments, questions to v.choutko@cern.ch