Antelope 5.2-64 release
Upgrade Recommendations

Version: 2012.254
Category: BRTT tools, Third party software
Objective: Upgrading Antelope (BRTT)

1. Supported platforms
a. By BRTT

From BRTT: "We have offered Antelope for several different versions of Linux going back at least 10 years. With Antelope Sun/Solaris system support going away in several years, we have been concerned about finding a suitable platform replacement for enterprise-class systems. We had hoped that Apple would continue to support the enterprise computing community, as they did in the past with their Xserve rack-mounted systems. However, it has become apparent to us that Apple is moving away from the enterprise-class computing community, especially after the EOL of their Xserve product line.
     Accordingly, we are pursuing development of Linux-based Antelope systems using enterprise-class computing hardware and software. In this software release we will offer full support for a particular Linux version in use today in many enterprise-class environments. After an informal survey we chose to develop for Red Hat Enterprise Linux (RHEL). Antelope 5.2-64 is compiled on version 6.2 of RHEL. We will offer the same level of support for the RHEL 6.2 version of Antelope as we do for the Apple and Solaris versions."

For more details on the 5.2-64 release, please go to:
http://www.brtt.com/release/5.2-64/

b. By PASSCAL
- *Linux   RedHat Enterprise 5 or higher*
- *Macintosh   Mac OS X 10.6.x (Snow Leopard) and higher,*
  - *We have dropped support for Mac PPC.*

PLEASE NOTICE THESE PLATFORMS ARE SUPPORTED FOR PASSCAL SOFTWARE NOT ANTELOPE.

VERY IMPORTANT:

All LINUX and MAC field machines provided by PASSCAL are little endian, for data archiving and ANTELOPE processing the data are required to be big endian. If you are processing your data on one of our field machines please be aware you may need to modify the endianess to big endian, this can be done using fixhdr* or with rt2ms* **

* (fixhdr and rt2ms - part of the PASSCAL software release
http://www.passcal.nmt.edu/content/software-resources) .
* ** (rt2ms – tool to process rt130 data)

2. DATA PROCESSING FOR PASSCAL OR FLEXIBLE ARRAY, HAVE ANY OF THE TOOLS CHANGED?

For the main tools listed below and usually described in our Antelope data processing guides, the short answer is NO. NO major changes have been encountered for these tools under any platform supported by BRTT.

PASSCAL currently uses ANTELOPE for the following purposes:
1. Generate the miniseed day volumes (with tools like miniseed2days, log2miniseed)
2. Create the metadata or dataless (mk_dataless_seed)
3. Verify integrity of the database by data generated in numerals 1 and 2.
    a. Data and dataless checks (mainly : dbverify, dbversdwf, seed2db)
    b. Please notice that the database does not need to be sent to PASSCAL, it is only used as a link between data & dataless so verifications can be made.
4. Antelope real time data acquisition – for internal purposes and for some Flexible array experiments.
    a. q3302orb – QUANTERRA dataloggers
    b. rt2orb – REFTEK (rt130) dataloggers
    c. Other real time tools as orb2db, orb2orb, etc for real time data storage.
5. Part of our in-house Quality Control System – all data submitted in seed format to PASSCAL for archiving recreates an antelope database in-house using the mseed data and dataless , this is done with the purpose of rebuilding the database as done by the PI and identifying possible issues on data or dataless.

3. Do I need to upgrade?

BRTT recommends upgrading to the most current version to which they provide support. Previous releases are UNSUPPORTED.

For data processing/archiving of any PASSCAL or Flexible Array (FA) Experiment we recommend the following depending on the stage of your experiment and the considerations stated below:

- **STAGE OF YOUR EXPERIMENT**
    o   If your experiment is almost completed or ends soon, continue processing with your current version of Antelope.

- o If you are about to start processing your data for archiving, please upgrade Antelope to 5.2-64
  - ▪ IRIS members can request Antelope from: http://www.iris.edu/manuals/antelope_irismember.htm

- o If you are NOT an IRIS MEMBER but are required to archive data from a PASSCAL or FA experiment please send an e-mail to data_group@passcal.nmt.edu and we will help you obtain 5.2-64 and its license.

- **ANTELOPE USE**
  - o **Platform dependent**
    We recommend using any of the currently supported platforms by ANTELOPE 5.2-64 and PASSCAL.
  - o **Data processing for Archiving**
    PASSCAL users have access to Antelope exclusively as a tool to generate their data in SEED format (mseed day volumes and dataless). There have been some changes to Antelope 5.2-64, but the basic functionality is the same (see http://www.brtt.com/release/5.2-64/ for specific changes). Remember, if you decide to stay with 4.11 or older, there will not be any BRTT support.
  - o **Data processing for further analysis/processing.**
    PASSCAL does not provide support for any analysis/processing done with Antelope beyond data archiving. If you have any interfaces to other programs/scripts/analysis tools with your local database, it is up to you to decide how upgrading will affect your local database.

4. **Useful man pages to review in Antelope 5.2-64**
    - o dbbuild & dbbuild_batch
    - o dbbuild_examples (please make sure you take a look at this one, there are plenty of good examples on how to edit your batch file)
    - o dbe
    - o dbverify
    - o dbversdwf
    - o log2miniseed
    - o miniseed2days
    - o seed2db
    - o mk_dataless_seed

How to Request and Install Antelope

PASSCAL computers have Antelope pre-installed. However, you may need to update the version of Antelope on the PASSCAL computer if it has been in the field for more

than one year. Additionally, BRTT releases patches throughout the year. Therefore we recommend you regularly check for Antelope patches. For more information about Antelope visit http://www.brtt.com and see the man pages.

❖ **IMPORTANT:** IRIS has an agreement with BRTT that the PASSCAL Instrument Center will provide Antelope support for all PASSCAL experiments. Please direct all Antelope questions to passcal@passcal.nmt.edu.

License Expired – antelope licenses (license.pf located under /opt/antelope/current_version/data/pf have an expiration date which is assigned by BRTT, if you get errors about your license expired, we suggest to either update your version of antelope to the most current one from the IRIS web page :http://www.iris.edu/manuals/antelope_irismember.htm , using the considerations stated above OR contact the data group at PASSCAL (data_group@passcal.nmt.edu) so we process your request with BRTT.

1) Requesting Antelope

Most current versions of Antelope are released early spring of each year. You should check for the most recent version at http://www.brtt.com. If you have an old version of Antelope please fill out the proper form here: http://www.iris.edu/manuals/antelope_irismember.htm.

If you or your institution is not an IRIS member but you will process data from a PASSCAL experiment, please contact us at data_group@passcal.nmt.edu. A list of IRIS members can be found at http://www.iris.edu/hq/about_iris/membership.

2) Installation

Please follow the installation instructions found in the README file. Make sure you complete the file site.pf with your network information. This file is stored in /opt/antelope/latest_version/data/pf/. For a detailed description of this file refer to the man page (i.e. **man** site.pf).

3) Setting the Proper Environment

Antelope is self-contained and requires certain environment variables to run properly. There are two scripts in /opt/antelope/latest_version that may be used to setup your shell environment (setup.csh and setup.sh). Depending on your login shell you will need to source one of these two scripts, and it is advisable that you include it in your login files. You can source this file with the following:

<my_cpu> **source** /opt/antelope/latest_version/setup.csh

Alternatively, you may put the following statement in your login scripts (assumes a

csh compatible session) to ensure the Antelope environment is set for all active shells:

```
if ( -r /opt/antelope/4.3u ) then
   source /opt/antelope/latest_version/setup.cshrc
endif
```

4) Verifying installation

You may run the command **check_antelope_installation** to verify the installation was done properly.

5) Licensing Antelope

To request a license, run the following commands:

```
<my_cpu> source /opt/antelope/latest_version/setup.csh
<my_cpu> register_antelope –m data_group@passcal.nmt.edu
```

If you install Antelope and you are not an IRIS member, but are processing data from a PASSCAL experiment for archiving, please do not complete the request form and enter QUIT to finish your installation. PASSCAL is responsible for processing all PASSCAL experiment license requests for BRTT

The **register_antelope** command will collect the necessary information about your working environment and launch a GUI interface. Verify the information, and under the heading 'license type' select 'node' before you submit the request to PASSCAL.

6) Patching Antelope

You should keep Antelope updated with available patches. To install patches you may need to be root (depending on the UID that owns /opt/antelope). The utility **antelope_update** is a GUI interface that will list and install available updates.

Please e-mail data_group@passcal.nmt.edu if you have any questions.