

Ham 94A – ASV Advance – Bash
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1. Sometimes you want to change values and setup from what everyone else has. Or you may be creative with messages. AllStar provides that capability. Commonly used configuration files are
 - o rpt.conf, simpleusb.conf, iax.conf, and extensions.conf.
2. Modification requires just a little Linux skill as shown below.
 - a. First some history or background about the relationship of names and systems shows how things fit together.
 - b. *Operating system* is the commands that make a computer work.
 - c. *GNU* (Gnu Not Unix) is a free software operating system based on cooperation between users.
 - d. *Linux* is the Gnu kernal that allocates machine's resources to the other programs you run.
3. Bash is a Command Language Interpreter (CLI).
 - a. Bash (Bourne-Again Shell) designed by Stephen Bourne ultimately became the standard for GNU.
 - b. In short, a shell is both a command interpreter and a programming language.
 - c. It is the Unix equivalent of DOS (command interpreter) and Basic (programming language). They fit together.
4. Files containing commands can be created, become commands themselves, and have extension *.sh.
 - a. A shell (.sh) is often stored in directory /root/etc/.
 - b. These new commands have the same status as system commands in directories such as /bin.
 - c. This allows users or groups to establish custom process/environments to automate their common tasks.
 - d. Commands operate synchronous (sequential), asynchronous (parallel) and interactive (keyboard input).
5. Now let us use it.
6. Go to **Admin Menu** > 9- Start Bash shell interface.
7. When 9- Start Bash shell interface is clicked, the infamous little black screen, with very simple commands pops up.
 - a. This is the same screen as Login.
 - b. The first part of the line indicates [who-is-the-user@hostname]#.
 - c. When you are finished in the CLI, 'exit' <enter> returns to the calling location, in this case the **Admin Menu**.
 - d. Every term is case sensitive.
8. For VOIP, all the configuration files are in the /etc/asterisk directory. If the directory is not 'asterisk', change it.

```
cd /etc/asterisk ;change directory to asterisk
ls ;list files in directory
```
9. A text editor is required to modify conf files. First type name of editor, space, the name of file.

```
nano rpt.conf ;nano is the most basic, easy to use line editor for conf modification
emacs rpt.conf ;emacs is one of oldest software maintained, very powerful, difficult to learn
ne rpt.conf ;ne is more powerful than nano, but is easier than emacs or vim
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10. A [stanza] is a section of a configuration file blocked by brackets. Each stanza does a different function.
 - a. Generally, we search for a particular stanza, then modify a few lines in the stanza.
 - b. ';' designates the beginning of a comment or information. Nothing after the ';' gets executed.
 - c. Make comments about anything you change. To prevent a line from working start with a ';'.
11. Nano editor commands are incredibly simplistic, as illustrated at the bottom of the nano screen.
 - a. Move cursor with the arrow keys. The mouse does not move the cursor.
 - b. Highlight with the mouse.
 - c. <ctrl-c> copies the highlighted items.
 - d. Paste with the right-mouse-button.
 - e. Undo is very difficult. <backspace> and <delete> highlighted character are about all you have.
 - f. Copy from other files and documents are transferred with the mouse paste.
12. To exit a nano file use <ctrl-x>, then <y> for yes to save, then <enter> to save to the same file name.
13. It really is that simple.
14. Life is good. Enjoy!

