

## **Linux Academy: Localization – Course Notes**

**<http://linuxacademy.com>**

### **Video One – /etc/timezone and /etc/localtime**

- /etc/timezone
  - text file that simply contains the locally defined system timezone information
  - timezone as defined in zoneinfo database (see Video Two)
- /etc/localtime
  - binary file that contains local time and timezone information as defined in the zoneinfo database
  - provides call back information to programs that implement the system 'strftime()' in their routines for getting information about localtime and timezone settings
  - newer distributions will be making it a symlink to the local time setting rather than a copy of the information in zoneinfo as set

### **Video Two - /usr/share/zoneinfo and /usr/bin/locale**

- /usr/share/zoneinfo
  - a directory and text based “database” of all available known timezones throughout the world
  - used by a large number of applications and local system utilities to get information about timezones, times in other zones, zone information in large zone settings, etc
  - used by localtime to provide information as part of its call back response to system time calls
- /usr/bin/locale: get locale specific information
  - -a: all locale (writes the names of all available locales)
  - -m: character maps (writes the names of all available character maps)
  - -c: write the name of selected categories
  - -k: write the names and values of selected keywords indicated
  - <no option>: provides all environment variable settings for locale information (money, number, time, date, papersize, etc)

### **Video Three – tzselect and tzconfig**

- tzconfig – deprecated in modern distributions, replaced by system reconfiguration utilities for tzdata (i.e. Debian 'dpkg-reconfigure tzdata'), used to reset local timezone information
- tzselect – view timezone information, query date and time in other zones
  - uses the settings and offsets defined in the zoneinfo database (see Video Two)
  - interactive script that will prompt you to choose more and more specific zones to view information on
  - when final zone is chosen, will display the current date/time and timezone setting for the selected zone

- will NOT reconfigure your timezone, see notes above on tzconfig and tzdata reconfiguration for details

#### **Video Four – ISO8859, Unicode, ASCII and UTF8 Character Encoding**

- detailed information is beyond the scope of these notes and is discussed in some detail in the videos, content from that discussion is pulled from each of the links below for each encoding
- ISO8859
  - <http://en.wikipedia.org/wiki/ISO8859>
- Unicode
  - <http://en.wikipedia.org/wiki/Unicode>
- ASCII
  - <http://en.wikipedia.org/wiki/Ascii>
- UTF8
  - <http://en.wikipedia.org/wiki/Utf-8>

#### **Video Five – iconv and date**

- iconv – convert encoding of files from one encoding to another
  - -f: from code
  - -t: to code
  - -l: list all known character encodings
  - -o: output to file rather than standard output
  - -s: suppress warnings
  - --verbose: print progress information
- date – print or set the system date and time
  - <no option>: print the date and time (i.e. Wed Jul 5 10:50:21 CST 2013)
  - -V: week number of the year
  - -s: set the date and/or time as indicated
  - abbreviations
    - %D: date
    - %T: time
    - %A: weekday name
    - %d: day of month
    - %t: tab
    - %a: abbreviated weekday name

#### **Video Six – Environment Variables**

- existing variables as managed by system utilities for localization settings
  - /usr/bin/locale
- overriding variables can be done the same way as any other variable is changed at the command line
  - export LC\_MONEY=<new value>
- overriding variables permanently for system
  - /etc/rc.local

- `export LC_MONEY=<new value>`
- overriding value for a logged in user or shell running with environment passed in
  - `/home/user/.bash_profile`
    - `export LC_MONEY=<new value>`
- otherwise locale specifies most localizations calls and zoneinfo determines other local information returned by `/etc/localtime`
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