**How Linux Uses the Locale**

Internationalization in Linux is handled with the GNU **gettext** library. If programmers write their applications with that library and annotate their messages correctly, the user can change the behavior with environment variables.

As multiple things that can be localized, such as numbers and messages, **gettext** has a series of environment variables that it checks to see which locale is appropriate. In order, these are

**LANGUAGE**

**LC\_ALL**

**LC\_XXX**

**LANG**

The **LANGUAGE** variable is only consulted when printing messages. It is ignored for formatting. Also, the colon (:) gives the system a list of locales to try in order when trying to display a system message. **LC\_ALL** is a way to force the locale even if some of the other variables are set.

**LC\_XXX** gives the administrator the power to override a locale for a particular element. For example, if **LANG** were set to en\_US.UTF-8 the user could override currency display by setting **LC\_MONETARY**. The **locale** command displays the current settings, as shown in [Example 11-10](ch11.html#ch11ex10).

**Example 11-10** Using **locale**

[**Click here to view code image**](ch11_images.html#p11ex10a)

**# locale**  
LANG=en\_CA.UTF-8  
LANGUAGE=en\_CA:en  
LC\_CTYPE="en\_CA.UTF-8"  
LC\_NUMERIC="en\_CA.UTF-8"

LC\_TIME="en\_CA.UTF-8"  
LC\_COLLATE="en\_CA.UTF-8"  
LC\_MONETARY="en\_CA.UTF-8"  
LC\_MESSAGES="en\_CA.UTF-8"  
LC\_PAPER="en\_CA.UTF-8"  
LC\_NAME="en\_CA.UTF-8"  
LC\_ADDRESS="en\_CA.UTF-8"  
LC\_TELEPHONE="en\_CA.UTF-8"  
LC\_MEASUREMENT="en\_CA.UTF-8"  
LC\_IDENTIFICATION="en\_CA.UTF-8"  
LC\_ALL=  
This example is from a typical English system. You can override just  
parts of it:  
**# LC\_TIME=fr\_FR.UTF8 date**  
samedi 7 mars 2015, 23:11:23 (UTC-0600)  
**# LC\_MESSAGES=fr\_FR.UTF8 man**  
What manual page do you want?  
**# LANGUAGE='' LC\_MESSAGES=fr\_FR.UTF8 man**  
Quelle page de manuel voulez-vous ?

In the preceding example, the time setting is switched to the French locale and the date is displayed in French. The second command sets the messages setting to French, but the English variant is used because the higher priority **LANGUAGE** is set. A French error message is used once **LANGUAGE** is set to nothing.