Configuring HP-UX for Different Languages

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1 How to Configure Your System Language

The HP-UX operating system provides a number of European and Asian locales, some supported via different codesets, for instance: iso8859-1 (Western European), utf8 (European & Asian, including Euro support) and iso8859-15 (Western European, including Euro support). See Appendix A, Locale Names, for a listing of the provided locales.

It also provides localized command line messages, graphical user interfaces, and some online help volumes in several languages.

HP-UX supports:

- European
- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese

There are three ways these languages are supplied for your HP-UX system:

1. You may order a specific language to be configured on your system at the HP factory.
2. Some HP-UX systems are shipped from the HP factory with all available languages and locales already installed on the system.
3. You may choose to load all (or individual) languages from the Core OS media that is shipped with your system.

This document describes how to configure your HP-UX system for proper behavior for languages other than English.

Languages Configured at the Factory

If you order your Workstation with a specific language configured at the factory, the system will “wake up” in that language the first time you turn it on. If you later decide to change the language, you will have to make sure the proper locales are loaded on your system and, if not, load them from the Core OS media. All available languages are included on the Core OS media. See “Loading Locales from the Core OS Media” on page 9.

Language Selection on Pre-loaded Systems

On Workstation systems that are shipped from the factory with all languages installed, the system will first “wake up” in English, then you must choose which language you want to use. You can customize the user interface for many different languages and for several user situations. Various elements such as screens, default languages, fonts, input (keyboard) methods and icons can also be changed. In addition, the menus, online help and error messages are available in multiple languages.

For complete instructions on how to choose your language on these systems, see the section “Managing the LANG Environment Variable” on page 10.

Loading Locales from the Core OS Media

Step 1. Check to see what locales are currently installed on your system by typing:

```
locale -a
```

Check to see what languages are installed on your system by typing:

```
/usr/sbin/swlist -l fileset International
```

Refer to the locale listing in Appendix A in this document for a description of the locales.

Step 2. If the locale is already installed, go to the section “Managing the LANG Environment Variable” on page 10.

Step 3. If the locale is not installed, you will have to load it from the Core OS media using the SD swinstall command.

Managing the LANG Environment Variable

To configure localized HP-UX sessions, you will need to:

- Manage the LANG environment variable.
- Access language-dependent message catalogs and resource files.
- Execute applications remotely across internationalized systems.

You can set the LANG variable to any locale that is supported by the HP-UX operating system, and installed on your system.

There are three ways to set the LANG environment variable, depending on how you want the locale to operate:

1. Customize the `/etc/dt/config/Xconfig` file. This method is used to set the locale system-wide, for all users and all sessions.
2. Customize the `.dtprofile` file. This method is used for a specific user who might need a different locale profile.
3. Choose a locale from the **Options** menu from the CDE login screen which changes the locale for that session.

Setting the Locale for Multiple Users (Xconfig file)

To set the system-wide default language settings, you must edit the Xconfig file. This sets the CDE login screen and the proper LANG variable for all users. This is the only way to change LANG for all displays in multi-display systems. Here is the procedure:

1. Check to see if the /etc/dt/config/Xconfig file exists on your system. If not, copy it from /usr/dt/config/Xconfig. Do not try to edit the /usr/dt/config/Xconfig file directly.
2. Edit the /etc/dt/config/Xconfig file and change the following line (see Appendix A for a listing of all locales):

   ```
   Dtlogin*language: <lang>
   ```

   For example:

   - To set the German iso8859-1 locale for all displays/users:

     ```
     Dtlogin*language:      de_DE.iso88591
     ```

   - To set the German iso8859-1 locale for a specific display ('hpabcd'):

     ```
     Dtlogin.hpabcd_0.language:    de_DE.iso88591
     ```

CAUTION

Make sure you DO NOT include a space or tab at the end of the <lang> value (de_DE.iso88591). This will cause the LANG variable to be incorrect and the locale will not be set properly.

3. Then execute:

   ```
   /sbin/init.d/dtlogin.rc reset
   ```

4. Log out and login again

The Dtlogin client reads the appropriate message catalog for that locale and brings up the localized CDE login screen, if the user interface has been localized for the chosen locale. Otherwise, the login screen will come up in English. The Dtlogin client then determines the list of locales using the following resource in the /etc/dt/config/Xconfig file:

- Dtlogin*languageList

Setting the Language for One User (`.dtprofile` file)

An individual user can override the system-wide `LANG` setting by changing his/her *`homedirectory`*`/.dtprofile` file. In this case, the login screen is not localized and `LANG` is set only for the current user.

Here is the procedure for customizing the `.dtprofile` file:

1. login *`user`*
2. Go to your HOME directory
3. Edit the `.dtprofile` file

   Add/Change the `LANG` environment variable.

   For example:

   - To set the locale to the French iso8859-1 locale

     ```
     LANG=fr_FR.iso88591
     ```

4. Save and exit
5. Log out and login again.

Setting the Locale for One Session (CDE Options menu)

To set the locale for one session, use the **Options** menu of the CDE Login Manager (the screen you see when you are ready to login to the system). By choosing a locale from this list, the `LANG` variable is set for the user on a per-login basis. The value of the `LANG` variable returns to its default value (as set in `dtlogin`, see above) when the user logs out at the end of the session.

Setting Default LANG on a Terminal Based System

Default language/codeset settings for terminal based systems are made by modifying the `.profile` or `.cshrc` file in the user's home directory. For example:

- To set the user's default login to the German utf8 locale, modify the following lines:

  When using `sh` or `ksh`, edit the `.profile` file as follows:

  ```
  LANG=de_DE.utf8
  export LANG
  ```

  When using `csh`, edit the `.cshrc` file as follows:

  ```
  setenv LANG de_DE.utf8
  ```

- To set the user's default login to the Canadian French iso8859-1 locale, make the following modifications.

  When using `sh` or `ksh`, edit the `.profile` file as follows:

  ```
  LANG=fr_CA.iso88591
  export LANG
  ```

  When using `csh`, edit the `.cshrc` file as follows:

  ```
  setenv LANG fr_CA.iso88591
  ```

Hardware Considerations

Keyboards

Some HP Visualize Workstations are provided with the USB keyboard, others with the PS/2 keyboard. You will be prompted to select one of several keyboard languages when the Workstation boots for the first time. The selected keyboard language name is stored in the `/etc/kbdlang` file.

After the first boot you can use the `keymap_ed` utility to display the list of the available keyboard languages:

```
/usr/contrib/bin/X11/keymap_ed -l
```

Terminals

To properly handle characters, terminals must be set for the roman8 or iso8859-1 codeset. Most HP terminals handle the roman8 character set. However, support for the iso8859-1 character set varies by terminal and emulation type. Terminal codeset configuration is usually set via function keys. The actual procedure varies by model. Please refer to your Terminal documentation.

Printers and Plotters

Printers and plotters can be configured via the front panel to print using either the roman8 or iso8859-1 character sets. Please refer to your printer or plotter documentation for detailed procedures.

2 How to Configure the Asian System Environment

In order to input and output Asian characters you also need to have the Asian System Environment (ASE) product. ASE includes enhancements to the system, tools and manuals.

To confirm the version of ASE, type:

```
/usr/sbin/swlist -l product Asian-Core
```

If ASE is installed on your system, you will see a list similar to this:

```
# Initializing...
# Contacting target "system name"...
#
# Target: system name:/
#

  Asian-Core                 B.11.22        Asian Core
```

If ASE is not installed on your system, you will get the following output:

```
# Initializing...
# Contacting target "system name"...
ERROR: Software "Asian-Core" was not found on host
"system name:/".
```

Configuring IMS

Supported IMS

The type of IMS (Input Method Server) supported for each Asian language is shown below.

Table 2-1 System Environments and Supported Input Methods

System Environment	Supported IMS
Japanese:	XJIM, ATOK8, ATOK X
Korean:	XKIM
Simplified Chinese:	XSIM
Traditional Chinese:	XTIM

Function of dtimsstart[1]

`dtimsstart` allows a user to select one IMS.

Before using `dtimsstart`, the user should set the environment variable `LANG` properly since `dtimsstart` changes its behavior according to the `LANG` value.

`dtimsstart` sets the environment variable `XMODIFIERS` appropriately to connect with the selected IMS so that a user can use the IMS without any additional configuration.

If you choose an Asian locale on the HP-UX CDE environment, `dtimsstart` is automatically started immediately after the user logs in. More precisely, `dtimsstart` is invoked automatically at `Xsession` startup (user login) by the script `/usr/dt/config/Xsession.d/0020.dtims`.

1. `dtimsstart` was known as `ximsstart` in pre HP-UX 11.0 operating systems and was not a standard part of CDE

Manual Start Up

It is useful to start IMS manually, if you use Asian Input Method on your C locale desktop. You can execute dtimsstart as follows on your command line.

```
eval '/usr/dt/bin/dtimsstart -env'
```

IMPORTANT The quotation mark of this line must be a left single quotation mark, and NOT apostrophe-quote.

NOTE Normally, dtimsstart shows messages and labels in Asian languages. If you want to see the messages and labels in English, set the environment variables to change to the C locale.

```
eval 'NLSPATH=/usr/dt/lib/nls/msg/C/%N.cat \
XENVIRONMENT=/usr/dt/app-defaults/C/Dtimsstart dtimsstart -env'
```

NOTE Your LANG variable must be set to the appropriate Asian locale in order for dtimsstart to work. After starting dtimmstart manually, it will only be active on applications launched in that locale.

Selection of the Input Method

- For Japanese locales (ja_JP.SJIS, ja_JP.eucJP, ja_JP.kana8, ja_JP.utf8)

  dtimsstart displays the selection window as shown below. By selecting one of the listed IMSs and clicking the **OK** button (left-most button), dtimsstart will start the selected IMS. For other operations on this window, selecting the **Help** button (right-most button) gives more explanation. The last selection (showing up in Japanese) means "No Japanese Input".

Figure 2-1 Japanese Input Method Selection Window

- For Korean locales (`ko_KR.eucKR`, `ko_KR.utf8`):

  `dtimsstart` starts XKIM without showing the selection window because only one IMS, XKIM, is supported for both locales.

- For Simplified Chinese locales (`zh_CN.gb18030`, `zh_CN.hp15CN`, `zh_CN.utf8`):

  `dtimsstart` starts XSIM without showing the selection window because only one IMS, XSIM, is supported for these locales.

- For Traditional Chinese locales (`zh_TW.eucTW`, `zh_TW.big5`, `zh_TW.ccdc`, `zh_TW.utf8`):

  `dtimsstart` starts XTIM without showing the selection window because only one IMS, XTIM, is supported for these locales.

- For Hong Kong locales (`zh_HK.hkbig5`, `zh_HK.utf8`):

  `dtimsstart` starts XTIM without showing the selection window because only one IMS, XTIM, is supported for both locales.

NOTE XKIM and XSIM do not have a visible main window, like other Asian IMS. To quit XKIM or XSIM, use `kill(1)` command or terminate the X server.

Simple Test

This section describes a simple test procedure to confirm that the Asian system environment is configured.

Japanese Environment Test With Keyboard

These descriptions are based on only `xjim`.

1. Set the input field in the foreground

   Your process will automatically connect with `xjim` foreground; then check that the cursor is in the input field.

2. Enable input

   Hit the left **Alt** key (**ExtendChar**) or **Ctrl+Space** to enable IMS input. Then a status window will appear at the bottom of the focused window.

3. Change input mode

   Hit the **F3** key to change its mode to input two-byte Roman characters.

4. Input characters

   Input some characters. They are displayed inverse video, and when the **Return** key is pressed, fixed strings are sent to the application.

To exit `xjim` input mode, hit the left **Alt** key (**ExtendChar**) or **Ctrl+Space**. The system will return to normal input mode immediately.

Korean Environment Test With Keyboard

These descriptions are based on only `xkim`.

1. Set the input field in the foreground

   Your process will automatically connect with `xkim` foreground; then check that the cursor is in the input field.

2. Enable input

   Hit the right **Alt** key (**ExtendChar**) to enable IMS input. Then, the status window appears at the bottom of the focused window.

3. Change input mode

   Hit the **F9** key to change its mode to input two-byte Roman characters.

4. Input characters

   Input some characters. Two-byte roman characters are displayed.

To exit xkim input mode, hit the left **Alt** key (**ExtendChar**). The system will return to normal input mode immediately.

Simplified Chinese Environment Test With Keyboard

These descriptions are based on only xsim.

1. Set the input field in the foreground

   Your process will automatically connect with xsim foreground; then check that the cursor is in the input field.

2. Enable input

   Hit the right **Alt** key (**ExtendChar**) to enable IMS input. Then, status window appears at the bottom of the focused window.

3. Change input mode

   Hit **F12** key to change its mode to input two-byte Roman characters.

4. Input characters

   Input some characters. Two-byte roman characters are displayed.

To exit xsim input mode, hit the left **Alt** key (**ExtendChar**). The system will return to normal input mode immediately.

Traditional Chinese Environment Test With Keyboard

These descriptions are based on only xtim.

1. Set the input field in the foreground

   Your process will automatically connect with xtim foreground; then check that the cursor is in the input field.

2. Enable input

   Hit the right **Alt** key (**ExtendChar**) to enable IMS input. Then, the status window appears at the bottom of the focused window.

3. Change input mode

   Hit the **Shift+F9** key to change its mode to input two-byte Roman characters.

4. Input characters

   Input some characters. Two-byte roman characters are displayed.

To exit xtim input mode, hit the left **Alt** key (**ExtendChar**). The system will return to normal input mode immediately.

Configuring Printers

Configuring the LP Spooler

ASE provides many kinds of LP model files which are designed to be configured by `sam(1m)`. To add, delete and maintain Asian printers with the model files in `/usr/lib/lp/model`, refer to the *Managing Printers* section of the *Managing Systems and Workgroups* manual.

Printing

To print Asian text on the printer, you may need to specify the locale value for the `lp` command along with the text file. For example,

`lp -oja_JP.eucJP` *`text_file_written_in_Japanese_euc`*

The following table shows the supported locales in HP-UX 11i

Table 2-2 Locales Supported by the lp command

Locale	Language/CodeSet
`ja_JP.SJIS`	Japanese/HP-15
`ja_JP.eucJP`	Japanese/EUC
`ja_JP.utf8`	Japanese/UTF8
`ko_KR.eucKR`	Korean/EUC
`ko_KR.utf8`	Korean/UTF8
`zh_CN.gb18030`	Simplified Chinese/GB18030
`zh_CN.hp15CN`	Simplified Chinese/GB2312
`zh_CN.utf8`	Simplified Chinese/UTF8
`zh_TW.big5`	Traditional Chinese/BIG5
`zh_TW.ccdc`	Traditional Chinese/CCDC
`zh_TW.eucTW`	Traditional Chinese/CNS

Table 2-2 Locales Supported by the lp command (Continued)

Locale	Language/CodeSet
zh_TW.utf8	Traditional Chinese/UTF8
zh_HK.hkbig5	Traditional Chinese/BIG5
zh_HK.utf8	Traditional Chinese/UTF8

The printer model files support a wide variety of options, such as font selection and page control. Consult the model file which is installed in `/usr/lib/lp/model` for more details.

Typically, the following model files are used for Asian printers:

Table 2-3 Model files for Asian printers

Model	Printers
PCL5.asian	HP LaserJet printers with Asian font DIMM
PCL5.nloo	HP LaserJet printers without Asian font DIMM
ESCP	Asian printers supporting ESC/P printer language

Simple Test

```
LANG=ja_JP.eucJP
export LANG
date | lp -oja_JP.eucJP -dprinter_name
```

Configuring Fonts

X11 Bitmap Fonts

Asian bitmap fonts for X window system are installed in the following directories.

Table 2-4 X11 Bitmap Fonts and Directories

Language	Installed Directory
Japanese	`/usr/lib/X11/fonts/hp_japanese/100dpi`
Korean	`/usr/lib/X11/fonts/hp_korean/75dpi`
Simplified Chinese	`/usr/lib/X11/fonts/hp_chinese_s/75dpi`
Traditional Chinese	`/usr/lib/X11/fonts/hp_chinese_t/75dpi`

The default X server configuration includes font paths above once ASE has been installed. Refer to the *Using Fonts* section of the *Using the X Window System* manual for bitmap font administration.

TrueType Fonts

The Asian TrueType fonts for the layered technologies, such as JAVA and X Window Systems, are installed in the following directories.

Table 2-5 TrueType Fonts, Typefaces, and Directories

Language	Typefaces/ Family Names	Installed Directory
Japanese	HGMinchoL HGGothicB	/usr/lib/X11/fonts/TrueType/japanese.st/typefaces
Korean	HYBatang HYDotum HYGulim HYGungsuh	/usr/lib/X11/fonts/TrueType/korean.st/typefaces
Simplified Chinese	ZYCJKHei ZYCJKSun	/usr/lib/X11/fonts/TrueType/chinese_s.st/typefaces
Traditional Chinese	ARMingtiL ARMingtiLHK	/usr/lib/X11/fonts/TrueType/chinese_t.st/typefaces

The TrueType fonts in the X Window System will be available only through X Font Server, xfs. Refer to “Remote Font Server Configuration” to start X Font Server.

Remote Font Server Configuration

On your remote server, prepare a font server to provide font service. Edit `/etc/rc.config.d/xfs` on your font server as follows.

```
RUN_X_FONT_SERVER=1
```

And set up your local host. The following is an example in a case where the server provides service at port number 7000 (default):

```
xset fp+ tcp/server_hostname:7000
xset fp rehash
```

A Locale Names

The following table lists the available locales for each supported language.

Table A-1 Locale Names

Language (Territory)	Locale Names
Arabic (Algeria)	ar_DZ.arabic8
	ar_DZ.utf8
Arabic (Saudi Arabia)	ar_SA.arabic8
	ar_SA.iso88596
	ar_SA.utf8
Bulgarian (Bulgaria)	bg_BG.iso88595
	bg_BG.utf8
Chinese, Simplified (China)	zh_CN.gb18030
	zh_CN.hp15CN
	zh_CN.utf8
Chinese, Traditional (Taiwan)	zh_TW.big5
	zh_TW.ccdc
	zh_TW.eucTW
	zh_TW.utf8
Chinese, Traditional (Hong Kong)	zh_HK.hkbig5
	zh_HK.utf8
Czech (Czech Republic)	cs_CZ.iso88592
	cs_CZ.utf8

Table A-1 Locale Names (Continued)

Language (Territory)	Locale Names
Danish (Denmark)	da_DK.iso88591
	da_DK.iso885915@euro
	da_DK.roman8
	da_DK.utf8
Dutch (Netherlands)	nl_NL.iso88591
	nl_NL.iso885915@euro
	nl_NL.roman8
	nl_NL.utf8
English (Computer)	C
	C.iso88591
	C.iso885915
	C.utf8
	POSIX
English (United Kingdom)	en_GB.iso88591
	en_GB.iso885915@euro
	en_GB.roman8
	en_GB.utf8
English (United States)	en_US.iso88591
	en_US.roman8
	en_US.utf8
Finnish (Finland)	fi_FI.iso88591
	fi_FI.iso885915@euro
	fi_FI.roman8

Table A-1 Locale Names (Continued)

Language (Territory)	Locale Names
	fi_FI.utf8
French (Canada)	fr_CA.iso88591
	fr_CA.iso885915
	fr_CA.roman8
	fr_CA.utf8
French (France)	fr_FR.iso88591
	fr_FR.iso885915@euro
	fr_FR.roman8
	fr_FR.utf8
German (Germany)	de_DE.iso88591
	de_DE.iso885915@euro
	de_DE.roman8
	de_DE.utf8
Greek (Greece)	el_GR.iso88597
	el_GR.greek8
	el_GR.utf8
Hebrew (Israel)	iw_IL.iso88598
	iw_IL.hebrew8
	iw_IL.utf8
Hungarian (Hungary)	hu_HU.iso88592
	hu_HU.utf8
Icelandic (Iceland)	is_IS.iso88591
	is_IS.iso885915@euro

Table A-1 Locale Names (Continued)

Language (Territory)	Locale Names
	is_IS.roman8
	is_IS.utf8
Italian (Italy)	it_IT.iso88591
	it_IT.iso885915@euro
	it_IT.roman8
	it_IT.utf8
Japanese (Japan)	ja_JP.SJIS
	ja_JP.eucJP
	ja_JP.kana8
	ja_JP.utf8
Korean (Korea)	ko_KR.eucKR
	ko_KR.utf8
Norwegian (Norway)	no_NO.iso88591
	no_NO.iso885915@euro
	no_NO.roman8
	no_NO.utf8
Polish (Poland)	pl_PL.iso88592
	pl_PL.utf8
Portuguese (Portugal)	pt_PT.iso88591
	pt_PT.iso885915@euro
	pt_PT.roman8
	pt_PT.utf8
Rumanian (Romania)	ro_RO.iso88592

Table A-1 Locale Names (Continued)

Language (Territory)	Locale Names
	ro_RO.utf8
Russian (Russia)	ru_RU.iso88595
	ru_RU.utf8
Serbocroatian (Croatia)	hr_HR.iso88592
	hr_HR.utf8
Slovak (Slovakia)	sk_SK.iso88592
	sk_SK.utf8
Slovene (Slovenia)	sl_SI.iso88592
	sl_SI.utf8
Spanish (Spain)	es_ES.iso88591
	es_ES.iso885915@euro
	es_ES.roman8
	es_ES.utf8
Swedish (Sweden)	sv_SE.iso88591
	sv_SE.iso885915@euro
	sv_SE.roman8
	sv_SE.utf8
Thai (Thailand)	th_TH.tis620
Turkish (Turkey)	tr_TR.iso88599
	tr_TR.turkish8
	tr_TR.utf8
Universal	univ.utf8