Chapter 6

Inst for Experts

This chapter provides instructions to users who are already familiar with the basic operation of Inst. It contains cursory installation instructions as an alternative to the detailed instructions in Chapter 5, and elaborates options for using Main menu commands. Finally, this chapter explains how to use features on the other Inst menus.

This chapter contains these sections:

- "Alternative Ways to Specify a Distribution"
- "Installing Software Noninteractively"
- "Using Command Shortcuts"
- "Using step to Make Selections"

Alternative Ways to Specify a Distribution

The *from* command specifies the distribution source for an installation session or portion of the session (see "Step 2: Specifying the Source" in Chapter 4 for basic information). This section suggests several alternatives to the specification methods described in Chapter 5.

Using the $dist Variable

The *$dist* variable is a shorthand notation to specify the location of a distribution. The value of *$dist* is the current value of the *dist* preference (see "A Closer Look at Preferences" on page 115). The *dist* preference is automatically set each time Inst reads product descriptions from a distribution source. When Inst is invoked, the value of *dist* is set to the last software distribution source that was specified in an Inst session.

Use *$dist* as an argument to *from* to specify the location of the distribution:

```
Inst> from $dist
```

You can check the value of *dist* at any time by entering this command:

```
Inst> view set dist
```

Specifying One Product as the Source

A distribution specification can contain the name of a specific product to be installed. These sample entries illustrate how to specify a single product as a distribution source:

```
Inst> from server:/CDROM/dist/product_name
Inst> from $dist/product_name
```

When you specify a product name, only the specified product can be installed. However, this method reduces the time required for disk space checking and verification of the installation history.

Specifying an Alternate User Account

As a default, Inst uses the *guest* account to connect to an installation server (see "Configuring an Installation Account" on page 19). To use an alternate account on the server, specify the user account name in your distribution specification:

```
Inst> from user@server:pathname
```

Specifying the Source on the Command Line

For a live installation, you can use the Inst command line argument **–f** to specify the distribution source. This is equivalent to giving the *from* command on the Inst Main menu. These examples illustrate *inst -f* command entries:

```
# inst –f /CDROM/dist
# inst –f server:pathname
# inst –f server:pathname/product
```

In your entry, specify the pathname of the software distribution for *source* (*/CDROM/dist*, for example); if the distribution is on a remote server, include the server name in your specification (*easyboy:/CDROM/dist*, for example). If you wish to install an individual product, substitute the shortname of the product for *product* in your entry (*easyboy:/CDROM/dist/InPerson*, for example). See "Step 2: Specifying the Source" on page 42 for additional information on specifying a distribution source.

Installing Software Noninteractively

It is possible to install software without using Inst menus; however, only live installations can be performed noninteractively. Noninteractive installations install the subsystems that are pre-selected by Inst (see "Required and Default Subsystems" on page 7 for information on these selections). In cases where the distribution contains an update to installed software, the older version on the target is replaced by the update. In cases where the distribution contains software that is not installed on the target, the default subsystems are installed (these are marked with *d* in *list* displays).

To install software noninteractively, use the *–a* argument (automatic) on the *inst* command line. To specify the location of the software distribution in the automatic installation, use the *–a* argument with the *-f* argument in your command. If you do not use the *–f* argument, the default is the software distribution source that you specified when you last used Inst.

In Example 6-1, the *ftn_dev* product is installed noninteractively from a software distribution directory on a remote workstation.

```
% /bin/su –
Password:
# inst –a –f easyboy:/d/IRIX_5.3/ftn_dev
#
```

Example 6-1 Sample of a Non-Interactive Installation

Using Command Shortcuts

The discussions that follow explain how to save keystrokes when using Inst commands. These shortcuts apply to all Inst menus.

Giving Commands by Number

Instead of command names, you can give command numbers at the prompt. For example, this command is the same as entering the *remove* command:

```
Inst> 5
```

Abbreviating Command Names

Inst recognizes the shortest unique abbreviation of any command, so your command entry can be very brief. You can also use command abbreviations in combination with keywords (see "Using Keywords as Arguments" on page 88). The sample entry below, which is an abbreviation for the *list* command used with the keyword *downgraded*, is the same as entering *list downgraded*:

```
Inst>l D
```

Using Wildcards in Subsystem Names

When you enter subsystem names as arguments to Inst commands, you can use wildcards to shorten your entries. Inst accepts these shell-style wildcards in subsystem names:

?	Matches one character.
*	Matches any combination of characters but applies only to the product, image, or subsystem portion of the name in which it is used. In other words, the asterisk (*) does not match characters in the entire subsystem name; it matches only the characters that appear in one segment of a subsystem name (see "Using Product and Image Names" on page 87 for an explanation of name segments).
[ ]	Matches any enclosed characters or a range of characters separated by a dash.

Table 6-1 illustrates the use of wildcards in product names.

Table 6-1 Subsystem Names Specified With Wildcard

Entry	Meaning
eoe.sw.*	All *sw* subsystems in the eoe product
.man.	All *man* subsystems in the distribution
***.man**	All *man* images in the distribution
eoe*	All products whose names begin with *eoe*
[a-c]*.sw.*	All *sw* subsystems in products whose names begin with a, b, or c

Using Product and Image Names

Any command that accepts subsystems names as arguments also accepts product and image names as arguments. This means that the trailing asterisk wildcards (.* and .*.*) are not necessary to specify all subsystems in an image or product.

Example 6-2 illustrates commands that use product and image names as arguments.

```
Inst> list eoe
Inst> install *.man
Inst> keep *
```

Example 6-2 Commands With Product and Image Arguments

You can always tell whether you are specifying a subsystem, image, or product name by the number of segments in the name. Product names contain one segment and no dots, image names contain two segments separated by one dot, and subsystem names contain three segments separated by two dots. These rules are true even when you use wildcards. Example 6-3 illustrates the structure of names in the product hierarchy.

```
dmedia_dev
dmedia_dev.sw
dmedia_dev.sw.audio
```

Example 6-3 Sample Product, Image, and Subsystem Names

Using Keywords as Arguments

The *list*, *install*, *remove*, *keep*, and *step* commands take arguments called *keywords*. Keywords are shorthand designations for groups of subsystems, images, or products. Many keywords have a long form and a single letter abbreviation.

Table 6-2 lists each keyword, its abbreviation (if it has one), and a description of the subsystems, images, or products that the keyword designates.

Table 6-2 Keywords

Keyword	Abbrev.	Meaning
all	a	All subsystems in *showprods -a* output plus all subsystems in the software distribution.
default	d	All subsystems that are recommended for installation by the manufacturer. The letter d appears after the subsystem name in *list* output.
distribution	dist	All subsystems in the distribution.
downgrade	D	All subsystems for which the version in the distribution is a downgrade of (older than) the installed version on the target. The letter D appears in the second column of *list* output
install	i	All subsystems that are selected for installation. The letter i appears in the first column of *list* output
installable	A	All subsystems in the software distribution. When no keyword argument is given to the *list* and *step*, the *installable* keyword is used by default.

Table 6-2 Keywords

Keyword	Abbrev.	Meaning
installed	I	All subsystems that have the same version installed and available for installation. The letter I appears in the second column of *list* output.
keep	k	All installed subsystems that are in the software distribution and are not selected for installation or removal.
miniroot	b	All subsystems that must be installed with a miniroot installation or that require a reboot to complete installation. The letter b appears after the subsystem name in *list* output.
newer	N or n	All subsystems in the distribution that are not and never were installed on the target. The letter `N` appears in the second column of *list* output.
notinstalled	(none)	All subsystems that were never installed on the target or were installed and later removed.
patches	(none)	All patches in the distribution.
patchupgrade	P	All patches on the distribution that are upgrades to installed patches. The letter P appears in the first column of *list* output.
removable	L	All installed subsystems that can be selected for removal.
remove	r	All subsystems that are selected for removal. The letter r appears in the first column of *list* output.
removed	R	All subsystems that were once installed on the target and later removed. The letter R appears in the first column of *list* output.
required	q	All subsystems that are required for proper operation of the target. The letter r appears after the subsystem name in *list* output.
same	S or s	All subsystems for which the version on the distribution and the version in the target are the same. The letter S appears in the second column of *list* output.

Table 6-2 Keywords

Keyword	Abbrev.	Meaning
target	targ	All subsystems on the target.
uninstalled	U	Subsystems that meet all of these conditions: they were available for installation in the past, they are not currently installed, they do not have a version in the distribution, and they are not *maint* subsystems.
upgrade	u	All subsystems for which the distribution contains a version that is an upgrade to the installed version on the target. The letter U appears in the second column of *list* output.
upgraded	u	All subsystems on the target that are being replaced by a distribution version (usually newer) as part of the installation of a related product.

Using step to Make Selections

The *step* command allows you to display the distribution or target inventory, one item at a time, as you make selections. By default, *step* displays subsystems in the distribution inventory, but like *list*, the output of *step* is determined by the current *view* settings. The *step* command takes the same keyword arguments and wildcards as *list*.

The items that *step* displays are determined by the arguments in your entry. For example, this *step* command causes only upgrade products to be displayed:

```
Inst> step U
```

After the entry, Inst posts selection information, followed by the first upgrade product in the distribution, as shown in Example 6-4.

```
Current View:
  Location:  distribution
  Status:    N=New,U=Upgrade,P=Patch upgrd,S=Same,D=downgrade,,' '=Not Installed
  Selection: i=install, r=remove, k=keep
  Level:     subsystem
  Name:      short
```

```
  Subsystem Type(s) [bdrp]: b=reBoot needed, d=Default, r=Required, p=Patch]
Step commands: i,r,k,n,p,...  Use ? for more step help.
i S refind.man.rfind [d]              0 Rfind Man Pages
```

Example 6-4 A step Command Display

As each software item is displayed, use the *i* (install), *r* (remove), or *k* (keep) to make selections. If you use a capital *I*, *R*, or *K*, your action applies to all subsystems in the product. To leave an item unchanged, press **<Enter>**. After your selection, the next subsystem is displayed for selection:

```
i D U 4dwm [d]            800+ Desktop Window Manager
  D U cadmin             1831+ Desktop Administration, 5.2
```

Continue until you finish making selections. Type *?* at any time for help. You can quit the *step* process at any time by typing *q*.

Using Advanced step Features

The *step* command allows an interactive operating mode that enables you to make subsystem selections with a special key or key combinations. In some cases, you can request a particular action using several different keys. Some special keys provide searching and listing capabilities.

Table 6-3 lists the special keys that you can use during *step* operations.

Table 6-3 Requests in *step* Operations

Level Affected	Requested Action	Keys
Subsystem	Select this subsystem for installation.	**i** or **u** or **<right-arrow>**
	Select this subsystem for removal.	**r**
	Keep the current subsystem version; cancel the current request.	**k** or **<left-arrow>**
	Select this subsystem for installation if it is marked with a *d*.	**d**

Table 6-3 (continued) Requests in *step* Operations

Level Affected	Requested Action	Keys
	No change to the current request for this subsystem.	**<Enter>** or **n** or **j** or **<down-arrow>**
	No change to the current request for this subsystem; display the previous subsystem.	**p** or **<up-arrow>** or **-**
	List all previous subsystems.	**l**
	List the files in this subsystem	**f**
Products	Select the remaining subsystems in this product for installation	**I** or **U**
	Select the remaining subsystems in this product for installation if they are marked with a *d*.	**<Shift><right-arrow>**
	Select the remaining subsystems in this product for removal.	**R**
	Keep the current version of this product; cancel the current request for remaining subsystems in the product.	**K** or **<Shift><left-arrow>**
	Select subsystems in this product for installation if marked with a *d*.	**D**
	Retain the current request for all subsystems in this product and display the first subsystem in the next product.	**N** or **J** or **<Shift><down_arrow>**
	Retain the current request for this product and display the first subsystem of the previous product.	**P** or **<Shift><up-arrow>**
All levels	Search for *pattern* and display the product that contains it.	**/***pattern***<Enter>**
	Display help for *step* operation.	**h**
	Quit *step* operation.	**q**