Contents

List of Examples xi

List of Figures xiii

List of Tables xv

IRIX Admin Manual Set xvii

About This Guide xix
Using This Guide xix
Inst or Software Manager? xx
Installing Diskless Systems xx
What This Guide Contains xx
Part I xx
Part II xxii
Audience for This Guide xxii
Notation Conventions xxiii
Related Documentation xxiii

1. Introduction 3
Software Product Releases 3
Anatomy of a Software Product 6
Product Descriptions 6
The Installation Database 6
Images 6
Subsystems 7
Required and Default Subsystems 7
Factory-Installed Subsystems 7
Patch Releases 8

Sources of Installable Software 9
Software Installation Methods 10
Introduction to Inst 11
Automatic Initialization 12
The Main Menu 12
Changing the Distribution Source 12
Viewing the Software Inventory 12
Selecting and Installing Software 13
Handling Conflicts 13
Ending a Session 13
Supplementary Menus 13
Getting Help During Installations 14

2. Preparing for Installation 15
Selecting a Distribution Source 15
Setting Up an Installation Server 16
Enabling BOOTP Forwarding on Routers 16
Enabling TFTP Access on an Installation Server 17
Configuring an Installation Account 19
Creating a Distribution Directory 19
Backing Up the Target Systems 21
Planning the Order of Installation 22
Collecting the Information That You Need 23
Getting CD-ROM Device Numbers 23
Getting the Target's Name and Address 24
Getting the Server's Name and Address 24
Getting the Installation Account Name 25
Preparing the Remote CD-ROM Drive 25

3. Starting an Installation 27
Determining the Installation Method 27
Preparations Checklist 28
About Miniroot Installations 29

Starting a Miniroot Installation 30
Preliminary PROM Monitor Procedure 30
Loading From a Local CD 32
Loading From a Remote Distribution Source 34
Starting a Live Installation 37

4. Using the Main Menu 39
The Software Installation Procedure 40
Step 1: Invoking Inst 42
Step 2: Specifying the Source 42
Using the from Command 43
Automatic Initialization Functions 44
Step 3: Displaying Software Information 44
Using the list Command 44
Displaying Software Installed on the Target 46
Interpreting list Output 47
Interpreting Patch Information 48
Interpreting the Disk Space Summary 49
Step 4: Making Software Selections 49
Using the install, remove, and keep Commands 50
Simple Selection Command Entries 51
Using Arguments in Selection Commands 51
Checking Your Selections With list 52
Accepting Automatic Selections 52
Step 5: Launching the Installation 53
Step 6: Resolving Conflicts and Other Errors 54
Using the conflicts Command 54
Correcting Other Installation Errors 55
Step 7: Quitting the Installation Session 56
Handling Unresolved Conflicts 57
If Rebooting Is Needed 58
The Requickstart Sequence 58

If Inst Is Interrupted 58
Completing a Checkpoint Restart 59
If a Checkpoint Restart Fails 60
Stopping the Remote CD Manager 61
Managing Configuration Files 62
The Configuration File Notice 63
Merging Configuration Files 63

5. Using Supplementary Menus 65
Giving Commands on Other Menus 65
Using the View Commands Menu 66
The target and distribution Commands 67
The filter Command 68
The level Command 69
The sort Command 70
The sizes and deltas Commands 70
The filesystems Command 71
Using the Administrative Commands Menu 72
The set Command 73
The date Command 74
The files Command 74
The space Command 76
The recalculate Command 76
The sh and shroot Commands 77
The mount and umount Commands 77
The mkfs Command 78
The sethostname and sethostipaddr Commands 79
The save and load Commands 79
The config Command 80
The hardware Command 80
Using the Interrupt Menu 80
Stopping an Installation 81
Using Other Interrupt Menu Commands 81

6. Inst for Experts 83
Alternative Ways to Specify a Distribution 83
Using the $dist Variable 83
Specifying One Product as the Source 84
Specifying an Alternate User Account 84
Specifying the Source on the Command Line 84
Installing Software Noninteractively 85
Using Command Shortcuts 85
Giving Commands by Number 85
Abbreviating Command Names 86
Using Wildcards in Subsystem Names 86
Using Product and Image Names 87
Using Keywords as Arguments 88
Using step to Make Selections 90
Using Advanced step Features 91

7. Maintenance Tips 93
Installing a Software Update 93
Installing Optional Software Products 94
Installing Patch Releases 95
Patch Installation Procedure 95
Removing Patches 96
Removing Original Product Files 96
Installing Software for Hardware Upgrades 97
Installing Accompanying Product Releases 97
Reinstalling the Same Software 97
Installing Reference Pages 98
Reinstalling an Older Software Release 99
Avoiding Compatibility Problems 102
Removing All Software 103

8. Tailoring Installations 105
Using an Initialization Script 106
Syntax of the inst.init Script 106
Writing an inst.init Script 107
Additional inst.init Script Rules 108
Sample inst.init Scripts 108
Using README Files in a Distribution 109
Checking the Current Preference Settings 109
Controlling Menu Displays 109
Turning Off Menu Displays 110
Displaying Hidden Commands 110
Redisplaying the Menu 110
Controlling Disk Space Checks and Reports 111
Estimated and Detail Space Checks 111
Changing Detail Space Checking 111
Delaying Disk Space Checking 112
Minimizing Disk Space Checking Time 112
Controlling the Display of Filenames 113
Displaying the Current Distribution Source 114
Turning Off Initial Selection of Subsystems 114
Changing the Network Timeout Value 115
A Closer Look at Preferences 115
The Preferences File 116
Creating Additional Preferences Files 116
The Preferences List 117

9. Licensing 135
FLEX*lm* File and Utility Locations 135
The FLEX*lm* Startup Sequence 136
Changing FLEX*lm* Software Locations 136

A. Inst Quick Reference 137
Condensed Installation Instructions 137
Main Menu Commands 139

View Menu Commands 146
Administrative Menu Commands 148
Interrupt Menu Commands 151

B. Troubleshooting Installations 153
Types of Errors 154
Fatal 154
Error 154
Warning 154
Resolving Errors 155
Errors Loading the Miniroot 155
Errors Loading the Miniroot From Local CD 156
Errors Loading the Miniroot From Remote Host 157
Other Errors Loading the Miniroot 161
Errors While Starting an Installation Session 163
Wrong Diskless Modes 163
Errors Starting Live Installation 164
Inst Library libinst.so Errors 165
Errors in the Distribution 165
Pre-Installation Check Errors 167
Errors While Installing and Removing Software 169
Disk Space Errors 170
subcommand and Exitop Errors 172
Network Timeout Errors 173
Archive Corrupt Errors 173
Device Busy Errors 174
Errors On Leaving an Installation Session (RQS Errors) 174

Resolving Conflicts 175
Resolving Different Types of Conflicts 176
Pre-Existing Conflicts 176
Required Product Conflict 177
Prerequisite Conflict 177
Back Prerequisite Conflict 177
Incompatible Products Conflict 178
Downgrade Conflict 178
Overriding Conflicts 179
Resolving Network Problems 179
Checking Network Connections 179
Network Problem Diagnosis During an Inst Session 181
Network Problem Diagnosis During Miniroot Installation 183
Resolving Problems With CDs 186
Checking CD-ROM Drives 186
Verifying That a CD-ROM Drive Is Recognized 186
Verifying That a CD Is Mounted 187
Checking Distribution Directories and CDs 188
Using fx to Restore the Swap Partition 189
Calling Your Support Organization 191

Index 193