

# Table of Contents

<b>Preface .....</b>	<b>ix</b>
<b>1. Installation .....</b>	<b>1-1</b>
1.1 Before You Start .....	1-1
1.2 Mount the CD .....	1-2
1.3 New Software Installation .....	1-3
1.3.1 Preparing for a New Software Installation .....	1-3
1.3.2 Performing a New Software Installation .....	1-4
1.3.3 Copy SIGMET environment files into /home/operator .....	1-6
1.3.4 Run setup utility .....	1-6
1.3.5 Get your SIGMET license (IRIS or TS Archive systems ONLY) ...	1-7
1.3.6 Run sigmet_env .....	1-7
1.4 Initial Configuration .....	1-8
1.4.1 Setting up for rcp and other “r” commands .....	1-8
1.4.2 Setting up for scp and other ssh commands .....	1-8
1.4.3 Serial Line Setup .....	1-9
1.4.4 Create mount point for MO disks .....	1-9
1.4.5 Installation Security Issues .....	1-9
1.4.6 Startup profile File .....	1-10
1.4.6.1 How to Create and Modify the profile File .....	1-10
1.4.6.2 Operator list Defined in the Startup File .....	1-11
1.4.7 Do platform dependent configuration .....	1-11
1.5 Configuring Linux for the first time .....	1-12
1.5.1 Automatic startup of X and Default SIGMET Environment .....	1-12
1.5.2 Configuring NTP .....	1-12
1.5.3 Configuring xinetd .....	1-13
1.5.4 Configuring the root prompt .....	1-14
1.6 Configuring HP-UX .....	1-15
1.6.1 Create the SCSI Pass-Through Driver for the RVP .....	1-15
1.6.2 Configuring for Automatic Startup .....	1-16
1.6.3 Create link for libXmu.sl .....	1-16
1.6.4 Check patches .....	1-17
1.6.5 Check kernel parameters .....	1-17
1.6.6 Enable windows on the local host .....	1-17
1.6.7 Disabling the Distributed Printer Services .....	1-17
1.7 Upgrade Installation .....	1-18
1.7.1 Preparing for an Upgrade Installation .....	1-18
1.7.2 When should I upgrade? .....	1-18

1.7.3	What should I do before I upgrade? .....	1-18
1.7.4	Where to get software upgrades? .....	1-19
1.7.5	How should I upgrade .....	1-19
1.7.6	Getting the network upgrade files .....	1-20
1.7.7	Performing an Upgrade Installation .....	1-22
1.8	Install Utility Window Options .....	1-24
1.8.1	“Read From” Option .....	1-25
1.8.2	Install To Option (Including Network Installs) .....	1-25
1.8.3	Manuals Option .....	1-26
1.8.4	EMACS Text Editor Option .....	1-26
1.8.5	Headers, Source, and Objects .....	1-27
1.8.6	Product Example file option .....	1-27
1.8.7	Verbose Option .....	1-28
1.8.8	Keep Old Files Option .....	1-28
1.9	Troubleshooting .....	1-29
1.9.1	File Ownership and Protection .....	1-29
1.9.2	Authorizing remote X-Windows on Your Node .....	1-29
1.10	Basics of Login, Logout and Shutdown .....	1-30
1.10.1	Power up procedure .....	1-30
1.10.2	Local and remote login .....	1-30
1.10.3	Default operator and root login passwords .....	1-30
1.10.4	Login procedure .....	1-30
1.10.5	Logout procedure .....	1-32
1.10.6	Poweroff shutdown procedure .....	1-32
1.11	RVP8 & RCP8 (RDA) Software Installation .....	1-33
1.11.1	Install the upgraded kernal module .....	1-33
1.11.2	Installation steps to “flash” FPGA’s in SIGMET devices .....	1-33
1.11.3	Reboot power-up check and RDA diagnostics .....	1-34
1.12	RDA Software Configuration .....	1-35
1.12.1	RCP8 Setup Configuration Summary .....	1-36
1.12.2	RVP8 Setup Configuration Summary .....	1-37
1.12.3	Configuring the softplane.conf file .....	1-39
1.13	Testing, Backup, and Calibration .....	1-50
1.13.1	Ascope Test (RVP8 Installations ONLY) .....	1-50
1.13.2	Antenna Test (RCP Installations ONLY) .....	1-50
1.13.3	IRIS Test (IRIS systems ONLY) .....	1-50
1.13.4	Print Special Files .....	1-50
1.13.5	Make a Full Backup .....	1-50
1.13.6	DSP Calibration (RVP Installations ONLY) .....	1-50

<b>2. UNIX Survival Skills .....</b>	<b>2-1</b>
2.1 Setting up the Login Environment .....	2-1
2.2 Running IRIS Utilities from a Remote Node .....	2-2
2.3 Managing an IRIS System .....	2-3
2.3.1 Checking the IRIS Environment .....	2-3
2.3.2 Reporting the Free Blocks on a Disk .....	2-4
2.3.3 File Ownership and Protection .....	2-4
2.4 Command Summary .....	2-5
2.5 CDE Front Panel Configuration .....	2-6
2.5.1 Installing the IRIS Utilities Icon .....	2-6
2.5.2 Installing the Utilities List .....	2-6
2.5.3 Getting the icons to display .....	2-7
2.6 Automatic Windows Startup .....	2-9
2.7 HP-UX Issues .....	2-9
2.7.1 Backup Procedure .....	2-9
2.7.1.1 Backing up .....	2-9
2.7.1.2 Restoring .....	2-9
2.7.2 Controlling banner page printing .....	2-10
2.7.3 Configure routing to another network .....	2-10
2.7.4 Booting in single user mode .....	2-10
2.7.5 Extending a logical volume .....	2-10
2.7.6 Using the floppy to read DOS disks .....	2-11
2.7.7 Fix ClearLine warning message .....	2-11
2.8 Linux Issues .....	2-12
2.8.1 Backup Procedure .....	2-12
2.8.2 Time & Date .....	2-12
2.8.3 LINUX for experienced users of other OS's .....	2-12
2.8.3.1 Unix to Linux .....	2-12
2.8.3.2 DOS to Linux .....	2-13
2.8.3.3 VAX/VMS to Linux .....	2-13
2.8.4 Red Hat Configuration Utilities .....	2-13
<b>3. IRIS Diagnostic Utilities .....</b>	<b>3-1</b>
3.1 sigmet_env Command .....	3-1
3.2 ps_iris Command .....	3-2
3.3 restart_iris Command .....	3-3
3.4 show_iris Command .....	3-4
3.5 structmap Command .....	3-6

<b>A. Installing Red Hat Linux</b>	<b>A-1</b>
A.1 Installation Overview	A-2
A.1.1 Using this Manual	A-2
A.1.2 Types of installation media	A-2
A.1.3 Installation Preparation	A-3
A.2 Automatic Installation (Operational & Miniroot)	A-4
A.2.1 SIGCONFIG & SIGBUILDMINI	A-4
A.3 Manual Installation	A-6
A.3.1 Disk Partitioning	A-6
A.3.2 Using fdisk	A-9
A.3.3 Operational Linux Install	A-14
A.3.4 Formatting and assigning mount points to partitions	A-16
A.3.5 Operational Package Selection	A-25
A.3.6 Final Steps of Operational Linux Installation	A-27
A.3.7 Miniroot (System Recovery) Install	A-28
A.3.8 Final Steps of Miniroot Installation	A-38
A.4 Configuring LILO	A-39
A.5 Manual Installation Configuration	A-41
A.5.1 RHEL ES 3	A-41
A.5.2 User Account Configuration	A-41
A.5.3 Configuration for Automatic Startup	A-42
A.5.3.1 Copying of Automatic Startup Programs	A-42
A.5.3.2 Enabling Startup Programs	A-42
A.6 Automatic Installation Configuration	A-43
A.6.1 Configuring X Windows	A-43
A.6.2 Configuring your time zone	A-43
A.7 Network Configuration	A-44
A.7.1 Basic Network Configuration	A-44
A.7.2 TCP/IP Service Configuration	A-44
A.7.3 FTP for Red Hat Enterprise Linux and Red Hat 8.0 (vsftpd)	A-44
A.7.4 Rcp	A-44
A.7.5 Routing	A-45
A.8 Region Specific Settings	A-46
A.9 Earlier Versions of the RDA Installation CD	A-47
A.10 X-Windows Troubleshooting: Framebuffer Method	A-49
A.11 Installing Linux on Windows System (Dual Booting)	A-51
A.11.1 Dual Boot (Windows & Linux) Tips	A-53
A.12 Special notes for notebook installations	A-54
A.13 RxNet7	A-55
A.13.1 OS Installation	A-55
A.13.2 Network Driver	A-55
<b>B. UNIX System File Listings</b>	<b>B-1</b>
B.1 /usr/sigmet/config_template/profile	B-1

<b>C. Printer Configuration .....</b>	<b>C-1</b>
C.1 Configuring Printer Queues for IRIS use .....	C-1
C.2 Displaying Print Queues .....	C-3
C.3 Configuring Printer Options .....	C-4
3.5.1 Printer Setup Menu .....	C-4
<b>D. sigbru Utility .....</b>	<b>D-1</b>
D.1 System Configuration for sigbru .....	D-3
D.1.1 Authorization to login as root on a remote system .....	D-3
D.1.2 Authorization to use a remote tape drive or remote disk drive .....	D-3
D.1.3 Archive device and media configuration for sigbru .....	D-4
D.2 Starting sigbru .....	D-6
D.3 The sigbru Menu .....	D-9
D.4 Making System Backups for Linux Computers .....	D-14
D.5 Documenting Your Linux Disk Partitions .....	D-18
D.5.1 Running df .....	D-18
D.5.2 Running fdisk .....	D-19
D.6 Documenting Your Basic Network Configuration .....	D-20
D.7 Selected File Restore Functions .....	D-21
D.8 Linux Disk Restore Functions .....	D-23
D.8.1 Disk Restore Overview .....	D-23
D.8.2 Step 1: Basic Linux Installation into a Mini-Root Partition .....	D-24
D.8.3 Step 2: Restore the sigbru backup to main partition .....	D-26
D.8.4 Step 3: Configuring to boot from the main or mini partitions .....	D-31
D.9 Test IRIS and Backup Your Restored System .....	D-36
D.10 Disk Crash After Mini-Root is Installed .....	D-36
D.11 sigbru -auto: Auto Archive Features .....	D-37
<b>E. Upgrading RedHat Linux .....</b>	<b>E-1</b>
E.1 Check your disk first .....	E-1
E.2 Backing up important files .....	E-1
E.3 Do the OS install .....	E-1
E.4 Do the IRIS or RDA install .....	E-1
E.5 Restoring from backup .....	E-1
E.6 Upgrade release notes .....	E-2
E.7 Done .....	E-2
<b>F. Installing IRIS/Web Server .....</b>	<b>F-1</b>
F.1 Installing IRIS/Web code .....	F-1
F.2 Installing the tomcat rpms .....	F-1
F.3 Configuring Java .....	F-1
F.4 Configuring Apache .....	F-2
F.5 Testing Apache .....	F-2

F.6 Configuring Tomcat4 .....	F-2
F.7 Testing Tomcat .....	F-3
F.8 Configuring the default page .....	F-3
F.9 Testing .....	F-4
F.10 Comments about browsers .....	F-4
<b>Index .....</b>	<b>Index-1</b>

## Figures

Figure 1–1:	Sample /etc/hosts.equiv File .....	1–8
Figure 2–1:	Sample .profile File .....	2–1
Figure A–1:	RedHat Greeting .....	A–4
Figure A–2:	RedHat Greeting .....	A–7
Figure A–3:	Language Selection .....	A–7
Figure A–4:	Keyboard Selection .....	A–8
Figure A–5:	Networking .....	A–8
Figure A–6:	Rescue .....	A–8
Figure A–7:	Rescue Command Shell .....	A–9
Figure A–8:	Rescue Command Shell .....	A–13
Figure A–9:	RedHat Greeting .....	A–14
Figure A–10:	Red Hat Enterprise Linux ES .....	A–14
Figure A–11:	Language Selection .....	A–15
Figure A–12:	Keyboard Selection .....	A–15
Figure A–13:	Mouse Selection .....	A–16
Figure A–14:	Disk Partitioning Setup .....	A–16
Figure A–15:	Format as Swap? .....	A–17
Figure A–16:	Partitioning (we are really editing) .....	A–17
Figure A–17:	Add Partition (we are really editing) .....	A–18
Figure A–18:	Add Partition Step 2 .....	A–18
Figure A–19:	Add Partition Step 3 .....	A–18
Figure A–20:	Operational LInux Partitioning .....	A–19
Figure A–21:	Format Warning .....	A–19
Figure A–22:	Boot Loader Configuration .....	A–20
Figure A–23:	Boot Loader Configuration (Step 2) .....	A–20
Figure A–24:	Boot Loader Configuration (Step 3) .....	A–20
Figure A–25:	Boot Loader Configuration (Step 4) .....	A–21
Figure A–26:	Network Configuration for eth0 .....	A–21
Figure A–27:	Miscellaneous Network Settings .....	A–21
Figure A–28:	Hostname .....	A–22
Figure A–29:	Firewall Configuration .....	A–22
Figure A–30:	Language Support .....	A–23
Figure A–31:	Time Zone Selection .....	A–23
Figure A–32:	Root Password .....	A–24
Figure A–33:	Workstation Defaults .....	A–24
Figure A–34:	Package Group Selection .....	A–25
Figure A–35:	Installation to begin .....	A–25
Figure A–36:	Video Card Configuration .....	A–26
Figure A–37:	Monitor Configuration .....	A–26
Figure A–38:	Screen “X Customization” .....	A–27

Figure A-39: RedHat Greeting .....	A-28
Figure A-40: Red Hat Enterprise Linux ES .....	A-29
Figure A-41: Language Selection .....	A-29
Figure A-42: Keyboard Selection .....	A-30
Figure A-43: Mouse Selection .....	A-30
Figure A-44: Disk Partitioning Setup .....	A-31
Figure A-45: Partitioning (we are really editing) .....	A-31
Figure A-46: Add Partition (we are really editing) .....	A-32
Figure A-47: Add Partition Step 2 .....	A-32
Figure A-48: Add Partition Step 3 .....	A-32
Figure A-49: Partitioning .....	A-33
Figure A-50: Boot Loader Configuration .....	A-33
Figure A-51: Network Configuration for eth0 (and eth1 if available) .....	A-34
Figure A-52: Miscellaneous Network Settings .....	A-34
Figure A-53: Hostname .....	A-34
Figure A-54: Firewall Configuration .....	A-35
Figure A-55: Language Support .....	A-35
Figure A-56: Time Zone Selection .....	A-36
Figure A-57: Root Password .....	A-36
Figure A-58: Workstation Defaults .....	A-37
Figure A-59: Package Group Selection .....	A-37
Figure A-60: Installation to begin .....	A-38
Figure A-61: chkdisk .....	A-51
Figure A-62: Convert NTFS partition (c:) to FAT32 .....	A-51
Figure A-63: Resize Partition .....	A-52

## Tables

Table 2-1: UNIX Commands .....	2-5
--------------------------------	-----