Step 9. Updating Your Software

For information on updating your iRMX software, please refer to the Release Notes.

Updating the software and generating a new version may cause the size of the OS to exceed the amount of memory allocated for it in the ICU definition file. If you get an error message, you will need to increase the amount of memory.

See also: Changing the Memory Size, Appendix E

Step 10. Generating a Default Operating System for the I/O Server Board

In this step, you make a new version of the OS using the **mksys** command. This version will independently boot the I/O Server board in your Multibus system, so it will act also as a processor board.

⚠ **CAUTION**

For any one definition file, do not invoke the **mksys** command again after you have successfully used it once to generate the OS. Because **mksys** does not use your modified file for input, it will overwrite the local copy of your definition file. You will lose any modifications that you have made to the file. Instead of using **mksys**, invoke the ICU using the definition file as the input parameter.

1. Table 4-5 shows the files used and generated by the **mksys** command for different processor boards. It also shows the board name to use for your processor board in these commands.

   Find the board name that corresponds to the processor board in your Multibus system. For instance, the SBC 386/258 board has the board name 386258.

   See also: Multibus II Standard Definition Files, *ICU User's Guide and Quick Reference*

Table 4-5. Files Generated by mksys for I/O Server Boards as CPU Boards

I/O Server Board	Board Name	ICU Definition File	Generation Directory	Boot File Pathname	OS Name
SBC 386/258	386258	258s.bck	:home:258s	/msa32/boot/258s	258s
SBC 386/258D	386258	258s.bck	:home:258s	/msa32/boot/258s	258s
SBC 486/133SE	486133	433s.bck	:home:433s	/msa32/boot/433s	433s
SBC 486/166SE	486133	433s.bck	:home:433s	/msa32/boot/433s	433s
SBC P5120ISE	P5120ISE	p90s.bck	:home:p90s	/msa32/boot/p90s	p90s
SBC P5090ISE	P5090ISE	p90s.bck	:home:p90s	/msa32/boot/p90s	p90s
SBC P5150	SBCP5150	p90s.bck	:home:p90s	/msa32/boot/p90s	p90s
SBC P5090	SBCP5090	p90s.bck	:home:p90s	/msa32/boot/p90s	p90s
SBC P5200	SBCP5200	P200s.bck	:home:p200s	/msa32/boot/p200s	P200s

2. This command may take as long as 45 minutes to execute. Sometimes the screen scrolls faster than you can read it. This is because the **mksys** command rapidly shows the ICU screens as it executes. The scrolling is not a cause for concern.

   Enter this command substituting the appropriate OS name for your processor board:

   ```
   - mksys os_name <CR>
   ```

   Various ICU prompts are displayed on the screen. These prompts are answered by a **submit** file. Do nothing until you see an END **submit** message.

   The **mksys** command creates a directory under your *:home:* directory. It attaches that new directory as your default prefix. It creates a local copy of the appropriate ICU definition file. Then it generates on disk an updated version of the OS suited to the processor board appropriate for the specified OS in the command.

   The command ends with a line similar to this:

   ```
   -END submit :config:cmd/mksys.CSD
   ```

3. Following the END **submit** message, use either the Aedit editor or the following **skim** command to discover if errors occurred in the process.

   While the **mksys** command was running, it recorded its progress in an output file. Use the **skim** command to read this output file to find out if any errors occurred during the generation process. Replace `os_name` with the same name you used in the **mksys** command:

```
- skim os_name.out <CR>
```

Press the space bar at the `more?` prompt to page through the file.

If the *os_name.out* file contains any error messages, some problem occurred during the **mksys** generation. Use an example file to identify the errors.

See also: Generation output file, *ICU User's Guide and Quick Reference*

If you find this error message, use the ICU to change the amount of memory reserved for the iRMX OS, as described in Appendix E.

```
ERROR 192:  NO SPACE FOR SEGMENT - BASE NOT SET
```

See also: Changing memory size, Appendix E

If you find a different error, call Intel Customer Support.

See also: Boot Scenarios, *MSA for the iRMX Operating System*

Step 11. Testing by Booting from the Hard Disk

To test the previous installation, you must shut down the OS, then reset and reboot the Multibus system.

1. Shut down the OS with the **sh** command (an alias for **shutdown w=0**):

   ```
   - sh <CR>
   ```

2. When you see a `Shutdown Completed` message, reset the system. Turn the key switch on the front panel of the computer to Reset and then back to Unlock.

3. When the first character appears on the screen, type a u. The power-up tests will run again.

   ```
   u
   ```

4. The system prompts you for a selection from this menu. Select `Go to Operator Interface` by typing 2 at the Enter number ? prompt:

   ```
   1 Run system Diagnostics
   2 Go to Operator Interface
   3 Go to Bootphase

   Enter number ?  2
   ```

   The 2 will not show on the screen. If you do not type a choice in 9 seconds, the system defaults to running the diagnostics (selection 1). The diagnostics can be interrupted by pressing <Ctrl-C>.

5. Enter the **mp** command to change a bootstrap parameter: