Section 9 – Control Center

The JNS Control Center, which replaces the JNIA Control Center, has four tabs:

- The Board Status tab (page 9–1) shows a list of boards with status and up time.
- The TFTP* Status tab (page 9–2) shows the state of TFTP transfers to boards.
- The Board Info/Control tab (page 9–3) allows you to see board information and send commands to boards.
- The Configuration tab (page 9–6) allows you to select configurations and activate them.

BOARD STATUS

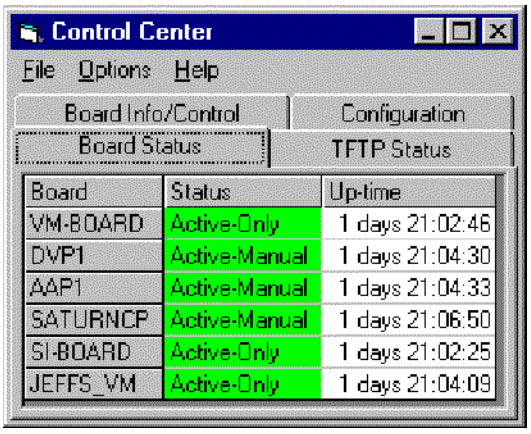

Figure 9–1.

The Board Status tab shows board status and up–time.

The first column lists the board names in the order that they appear in the Network Description table (note that PC boards do not appear here).

The second column shows the board status. The fields will be green if the board is active. If boards are inactive, “Inactive” will appear in the field and the field will be red. If a board is currently downloading, “LOADING...” will appear in the field, and the field will be cyan.

The third column shows how long the boards have been up in days, hours, minutes and seconds. For the up–time display to be accurate you must have selected the correct Scan Rate option in the options menu (see below).

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* See Glossary.

TFTP STATUS

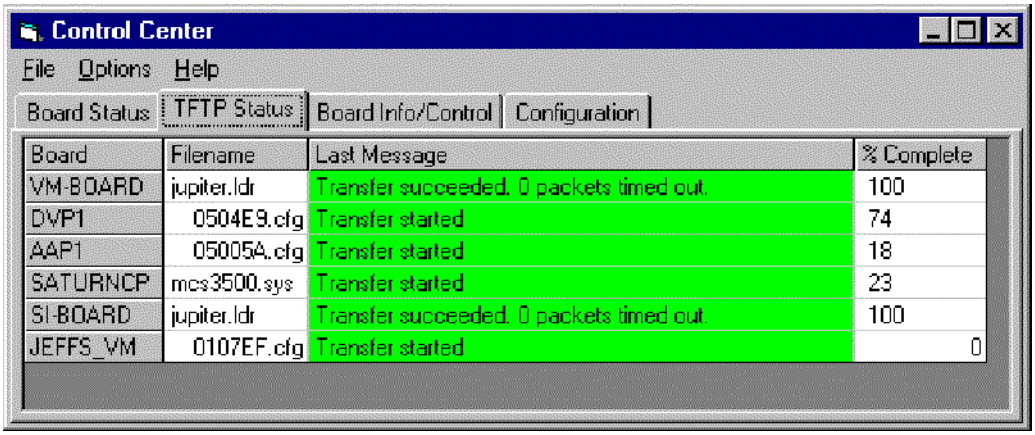

Figure 9–2.

This table shows TFTP status while the boards are in the process of downloading.

The first column shows the boards in the order that they appear in the Network Description table (again, PCs do not appear).

The second column shows the name of the file that the board is downloading. In the example above, you can see some boards downloading their configuration files (.cfg), one board downloading code (.sys), and two boards have just finished downloading loader code (.ldr).

The third column shows the status of the transfer. On a busy system, you may occasionally see packet timeout counts. This indicates that the file server has missed responses from a board. This does not necessarily indicate a serious problem. Packet timeouts frequently occur on very busy systems. When a transfer succeeds, the "Transfer succeeded. <n> packets timed out." message will be displayed and the field will be green. If the transfer fails, the field will turn red, and a description of the problem will appear in the field. This may be a temporary condition. The boards will usually attempt to start new transfers in this case, and the field will turn green again as the new transfer starts. A very large number of timeouts or frequent transfer failures could indicate problems with your network or configuration.

The fourth column shows what percentage of the file has been sent.

BOARD INFO/CONTROL

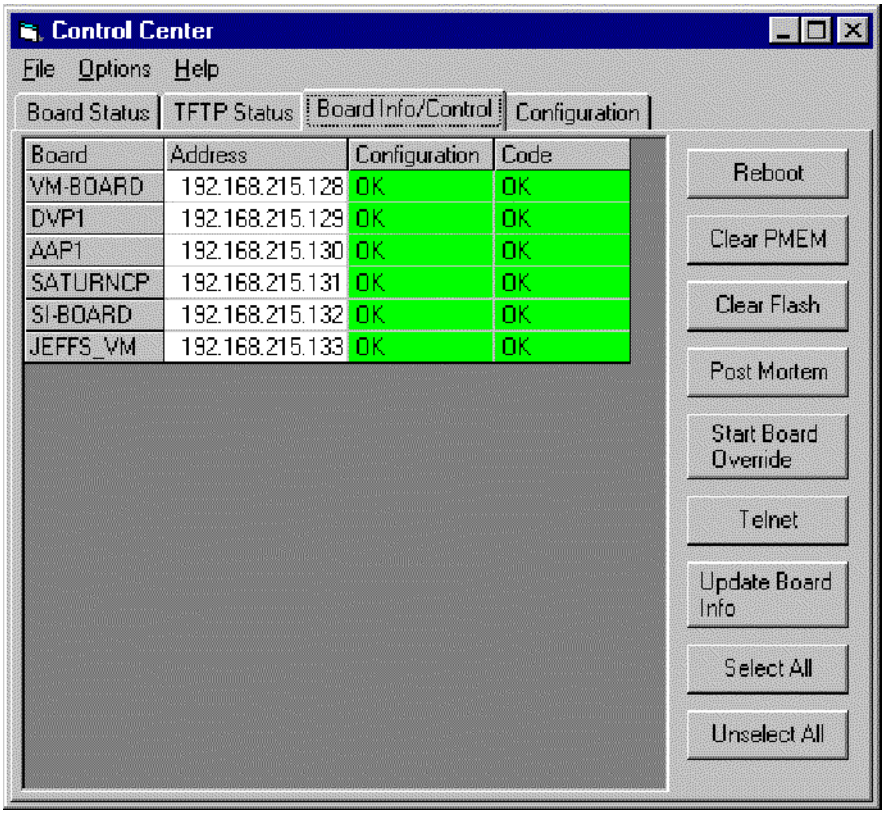

Figure 9–3.

This application can be used to help make certain that all VM/SI/Saturn boards are using compatible software and user–created configuration sets. It also allows you to send commands to the boards.

The first column of the table shows board names in the order that they appear in the Network Description table (PCs do not appear).

The second column displays the current IP address of the board.

The third column indicates whether the board's configuration set matches the active set on the file server. If the sets match, "OK" appears in the field and the field is green. If they don't match, the field is red and "MISMATCH" appears. This status will usually appear if you activate a new set without rebooting. If the board is downloading or inactive, the field is cyan and "?" appears.

> Note: a "Pending Reboot" message applies only to CM 4000 / Jupiter XPress systems.

The fourth column shows whether the board's operating system code matches the code on the file server. Indicators are the same as for the Configuration column.

Selecting Boards

You must select boards before you can send commands to them. To select individual boards, click anywhere in that board's row in the table. The selected board will appear in a darker gray in the Board column and the board's IP address field will turn blue. To de–select a board, click in the row again.

To select all the boards, click on the Select All button. To de–select all boards click on the Unselect All button.

Reboot

This button sends a reboot command to the selected boards only. This differs from the Reboot button on the Configuration tab, which sends reboots to **all** boards.

Note: Having different versions of software or configuration tables between boards can cause system instability.

Clear PMEM

This button clears PMEM on the selected boards.

Clear Flash

This clears flash memory on the selected boards and reboots them. The boards will immediately begin downloading all configuration and code.

Post Mortem

This starts the post–mortem debugger on the selected boards.

Start Board Override

Start Board Override is a troubleshooting tool intended for programmer use. When the Start Board Override button is selected, and a board selected and booted, the basic operating system will launch but the Jupiter processes will not start. Boards in this state will display a Probe message similar to “pmemOverrideStartBoard is set, not starting this board.” Using Probe, one can enter “startBoardOverrideShow” from the shell to determine if the board will or will not start up on the next reboot. Once troubleshooting is completed, one can either reboot the board (which will automatically “start” all processes), or use the Probe command “startBoard” to resume normal board operation.

Probe connections are desecribed in Appendix C.

Telnet

This opens telnet windows for the selected boards. For this command to work, you must have a “telnet.exe” application somewhere in your search path. The default TCP/IP Windows installation will do this for you. Note that if you have selected several boards, the telnet windows may appear on top of each other. Simply move them to see the ones underneath.

Update Board Info

This requests updated board information from the boards. The control center does not poll for board information. It does attempt to update board information when boards become active, but the display may occasionally show incorrect information. If you suspect this, click on the Update Board Info button.

MENU COMMANDS

Several commands are accessible through the control center's menu:

File

Exit

This closes the application.

Options

Scan Rate

You must select the correct scan rate for your system for board up–time to be displayed correctly:

NTSC - Select this if you use NTSC.
PAL - Select this if you use PAL.

Time Sync

(Applies to VM only.) This enables the JNS time synchronization server, which syncs the PC's clock to the existing time of the Jupiter system (VM time).

VM time is derived from the following (in order of priority):

1. Time code (if present) (VM connection to a time code source is recommended)
2. Switcher Esbus protocol source (e.g. automation computer) (if present)
3. VM internal clock (if previously set from time code)
4. PC clock (if Time Sync is enabled)
5. VM internal clock (if set by the file server)
6. VM internal clock

The PC is the only possible source of date information on the system.

Note: Windows XP servers have the option of using an internet time server as a source. This is *not* recommended.

Help

About - Displays the Control Center's About box with version information.

CONFIGURATION

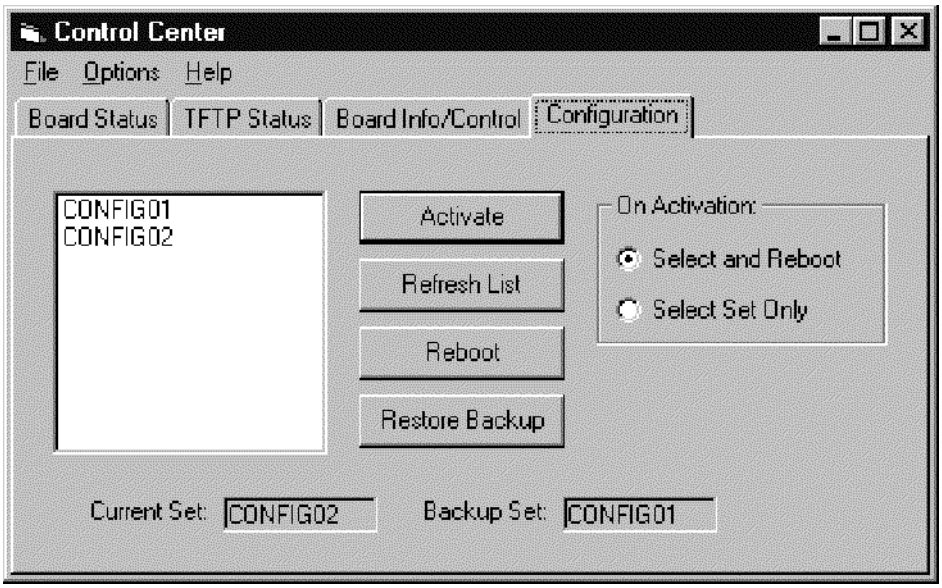

Figure 9–4.

The Configuration tab allows you to see a list of compiled sets and select a set for activation. It also allows you to restore a previously activated set and reboot the boards.

Simple Set Activation

On the left side of the window, you will see a box that shows a list of compiled sets. To activate a set, click on the set name in the list, make sure the Select and Reboot radio button is selected, and click on the Activate button. A status dialog will appear while the set activation is occurring:

Figure 9–5.

Once set selection completes, the following dialog will appear:

Figure 9–6.

At this point, a reboot command will be sent to all the boards in the set, and the boards will reboot and download the new set.

> *Caution: Once the activate/reboot command has been issued, do not interrupt the process until the reboot is complete. Interruptions such as sending a new command, turning off power, or disconnecting cables will have unpredictable consequences.*

Though the “Configuration” tab gives no indication of activity during file transfers, other tabs (described above) can be used to determine when it is safe to initiate some other command. Depending on a several factors such as the number of boards, configuration size, need to update the *.sys file, LAN transmission rate, LAN traffic, etc., a complete set change can take several seconds or multiple minutes.

Activation Without a Reboot

Selecting the “Select Set Only” radio button will prevent the Control Center from sending a reboot to the boards after a set activation. Keep in mind that the active set will not match what is on the board. If any boards reboot after this time, they will download the new set, but they will not match other boards that have not rebooted. This can cause system instability. For this reason, you should not usually leave the file server in this state. Reboot all boards as soon as possible.

Reboot

Clicking on the “Reboot” button sends a reboot command to all the boards. If the boards do not have the currently active set, they will download the new set.

Backup Set

Whenever you activate a set, the name of the new set appears in the Current Set box and the name of the old set appears in the Backup Set box.

To restore a backup set, click on the Restore Backup button. The backup set will be made the active set. The name of this set will now appear in the Current Set box, and the Backup Set: box will be cleared. Note that the Control Center does not “swap” sets. That is, the set that was active before you clicked on Restore Backup does not become the backup set.

The “On Activation” radio buttons have the same effect for restoring backups as they do for activating sets. That is, if the “Select and Reboot” radio button is selected when you restore a set, the backup set will be made active, and a reboot command will be sent to the boards. Otherwise, the set will be activated but no reboot command will be sent.