MAXC Room Power Down/Up Procedure

by Ron Weaver

Abstract: This procedure itemizes the chronological steps necessary to systematically shut down the power in the Maxc room when a known power outage is scheduled.

EMERGENCY shutdown procedure (for fire or smoke) may be found in Appendix A.

A version of this procedure will appear in the *Maxc Operations* manual.

XEROX

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1. Prior to Shutdown

In order to give users adequate notice and to protect files on disk, Tenex should ordinarily be stopped in the following manner.

Forty-eight hours prior to the scheduled power outage send a message to the NCC Coordinator and the Arpanet liaison at SCI via their Arpanet mailboxes CONTROL@BBNC and Green@SCI-ICS stating the period the power will be off and that the IMP will be affected. If the scheduled power outage is to take place in less than 48 hours then the NCC Coordinator may be reached direct by phone: (617) 661-0100. The controller may wish you to call him just prior to taking the system down so you can set some switches on the IMP panel.

As long as possible before the scheduled downtime (preferably 24 hours or more), notify users by (optionally) putting a notice in the login message, setting the system downtime cell and recording a telephone message.

A. To put a notice in the login message, login as yourself and:

>   @SNDMSG<cr>
>   To: SYSTEM<cr>
>   cc:<cr>
>   Subject: Scheduled downtime<cr>
>   Message:
>   (An appropriate message giving date, time, and reason)
>   ^Z
>   Q,S,?,carriage-return: <cr>
>   SYSTEM -- ok
>   @

B. To set the system downtime cell, you must be a wheel or a maintenance person:

>   @ENABLE<cr>   (*only* if you are a *wheel*)
>   !HALT,<cr>   (do *not* omit the comma)
>   [Superpassword:] GUESS<cr>
>   !!AT mm/dd/yy/ hh:mm<cr>   (date & time system going down)
>   !!UNTIL mm/dd/yy hh:mm<cr>   (date & time coming back up)
>   !!DUE (TO REASON) reason (type ? for list)   <cr>
>   !!<cr>
>   !

C. To record a telephone message, go to the recording telephone (next to the Imp in the back room) and follow the instructions posted there.

2. System Shutdown

General Methodology:
    (1) Shut down software systems cleanly
    (2) Safeguard rotary storage by spinning down all disk drives
    (3) Get all other power off in the simplest manner possible so that restart can be accomplished
      without an excessive current surge.

Maxc

The system will automatically start notifying users of the impending downtime beginning one hour before it is to occur. When the zero hour arrives, all jobs will be forcibly logged out except any job logged in on the Maxc controlling terminal, new logins will be prevented, and "Shutdown Complete" will type out on the Maxc console. If there are now no jobs logged in, Tenex will shortly hit a BUGCHK (EDDT breakpoint) at SWHLT1, at which point Tenex is properly halted.

If there is a job logged in on the Maxc controlling terminal, it will be necesary to halt Tenex manually. To do this (for which you must be a *wheel*):

        @ENABLE<cr>
        !QUIT<cr>
        .Halt Tenex .

Wait for the EDDT preakpoint at SWHLT1. A message such as "$8B>>CHKADR BUGCHK/ SWHLT1" should be printed out.

Once the Maxc2 system have halted you may proceed by stopping the rest of the systems in the Maxc room.

Alpine
    Boot Dorado. *(Really!)*

Ivy
    From an Alto or DLS terminal:

        Chat Ivy<cr>
        Ena<cr>   *NOTE 1:*   You must be an Ivy *wheel*.
        Halt<cr>
        Quit<cr>

Twinkle

Ctrl-Shift-D   (to turn on display)

Position cursor over "gateway" window, press down middle button, select "gateway"

menu, let up button.

Press down middle button, select "quit" item, let up button.

DLS

Quit<cr>

3. Removing System Power

Maxc Disk Drives

Turn off Front switch first, then the switch in the rear.

> *NOTE 2:*   An alternate procedure, (which is   <u>not</u> advised due to the fact that some
>   circuit breakers may be in the off state prior to shutdown for some reason,
>   and the difficulty in correctly identifying all of them may lead to errors
>   when restoring power) instead of turning off the switch in the rear of each
>   disk drive, is to wait until everything else in this section has been done and
>   then throw all the circuit breakers on the Maxc, Maxc-A and Maxc-B Circuit
>   Breaker Panels, *noting carefully the ones which are already off*.

Maxc

Press middle blank button then type

3301P

M.

With the left mouse button successively select the menu items "Power Off" and

"Both".

> *NOTE 4:*   (The message "Processor locked on" will appear. Just shut off the
>   processor power supply manually. The automatic power-off
>   circuitry is missing.)

Spin down ALTO disk

Throw CKT breaker on front of Processor

Throw CKT breakers on all power supplies (front).

Pull 20 amp CKT breaker on panel above ALTO.

Twinkle

Spin down disks *(wait until they stop)*

Pull out upper blower drawer and turn off switch inside top left.

Alpine

>Spin down disks (Dorado T-80 and T-300 #1).
>Power down Dorado as for any Dorado.
>Turn off T-80 and T-300 disk power switches.

Ivy

>Spin down disks (ALTO & six Trident disks)
>Turn off ALTO power switch
>Turn off T-80 & T-300 disk power switches (in rear, or see *NOTE 2* on page 3)

DLS

>Spin down disk and *(after it stops)* pull 15 amp CKT breaker above.

IMP

>Don't worry about it unless NCC has asked you from an earlier phone call to call
>   just before removing power.
>NCC likes to be called two days before scheduled shutdowns.

Dorados

>For each Dorado, if it is not already powered off *(green light 5 flash)* find its
>   terminal and press boot button seven times in quick succession to shut down.
>Wait until green lights are flashing fives before throwing CKT breakers.

4. Start Up Sequence:

Close *only* those circuit breakers on panels marked Maxc, Maxc-A, & Maxc-B, that were opened
during the initial powerdown sequence.

Twinkle *(Should be started first for Date & Time source to other systems.)*

>Turn on AC Power and spin up disks
>Boot ALTO
>Type GATEWAY<cr>   (2 minutes to come on)

>>*NOTE 5:*   Don't bring anything else up until message "Gateway in operation" appears on
>>   Twinkle screen, or 1 minute after screen turns blank, whichever occurs first.

Remaining machines can be started in any order (or simultaneously).

DLS

Set CKT breaker
Spin up disk
Boot ALTO
Type DLSCONTROL

Maxc

Turn on ALTO
Spin up ALTO disk
Turn on all Processor and Memory cabinet power supplies
Boot the Alto and run the Midas subsystem. With the left mouse button,
succesively select the menu items "Power On", "Both", and "Do-It".
Turn on Disk drive AC power (in rear) then front panel switches

> *WARNING:*   Wait at least 10 seconds between spinning
> up each drive to allow for the starting surge.

Normally the configuration is set up properly; just type MIDAS TENGO.
See Section 5 & 6 of *Maxc Operations* for abnormal situations.

After all disk drives are ready you may start AltIO and start Tenex by
selecting "Run-Prog", "Tengo" with the mouse.

Alpine

Turn on Dorado.
Turn on T-80 and T-300 power.
Spin up T-80 and T-300.
Boot.
Type cr to command line "Luther".

Ivy

Turn on ALTO
Spin up Diablo disk
Turn on Trident disks AC power
Spin up Trident Disks
Boot
Type IFS

Dorados

Turn on Breakers (that's all)

Imp

Should restart by itself. Call NCC to verify correct operation.

References

1. Edward R. Fiala, Charles M. Geschke, Edward Taft, and Ronald L. Weaver *Maxc Operations*, XEROX, April 24, 1984.