



# **PlantScape Controller Implementation**

## **Lesson 4**

### **PlantScape Ntools Familiarization**

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#### ***Notes***

#### **Introduction**

The purpose of this lesson is to give you the knowledge to be able to use the Ntools to help facilitate maintenance of the the Control Net and the Hybrid Controller.

#### **Objectives**

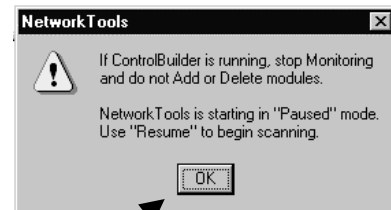
To become familiar with some of the more frequently used features of Ntools

**Note:** Ntools can only be run on the Server. It is not available to remote Stations or remote Control Builder PCs. Please work together on your Server to view the screens.

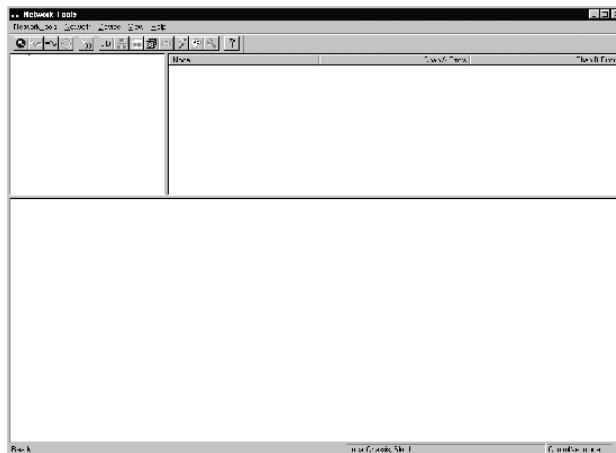


## PlantScape Ntools Familiarization

- Start Ntools from the Run menu
  - **Start** → **Run**
- Type “Ntools -c” at the Run menu and press enter.
- Click OK to acknowledge the warning about monitoring through Control Builder.



- The screen shown will come up



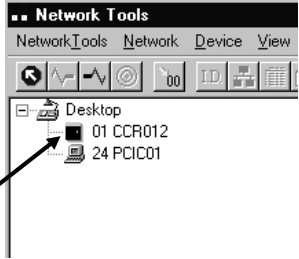


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## Notes



## PlantScape Ntools Familiarization

- Start network scanning by selecting the Resume Icon. 
- When the Polling indicator at the bottom Network Tools screen reaches 24, stop scanning by selecting the Pause Icon 
- Single click the blue/black box in the Tree pain 
- N-tools will scan the chosen device and show a detail display of the controller in the Detail Pane as shown below. (See the next page for a description of the N-tools screen layout.)

0	1	2	3	4	5	6	7	8	9
CCR012	PRS021				IDJ161	ODJ161	0AH061	1AH061	
IDLE	RUN				○ K	○ K	○ K	○ K	
V 4.22	50mS CEE				V 1.6	V 1.6	V 1.9	V 1.9	
AW01 W	AVPS320.0-20.1								
	BVPS320.0-20.1								

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## Notes

### Details of the controller

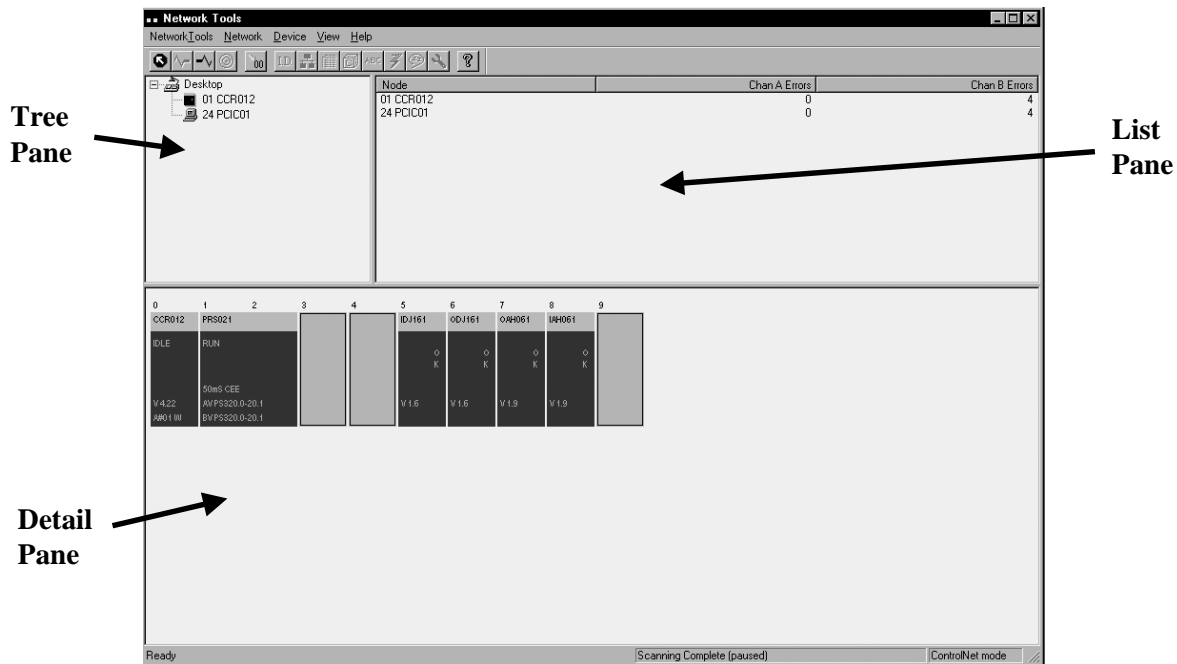
If the controller has not been previously detailed in N-tools, after clicking the icon in the tree pane, you will see a dialog box asking how many slots are in the rack. If there are any outboard racks to detail, use the provided tabs to set up the number of slots in those.

This information is needed so that the detail display shows any spare slots accurately. After the initial callup this information is stored in N-tools.



## PlantScape Ntools Familiarization

- N-tools Screen Layout



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### Notes

#### N-tools Screen Layout

N-tools is divided into three main screen regions or panes:



- Tree Pane which shows the devices in the supervisory Control Net.
- List Pane which shows Control Net performance statistics.
- Detail Pane which shows the details of the object selected from the Tree Pane.

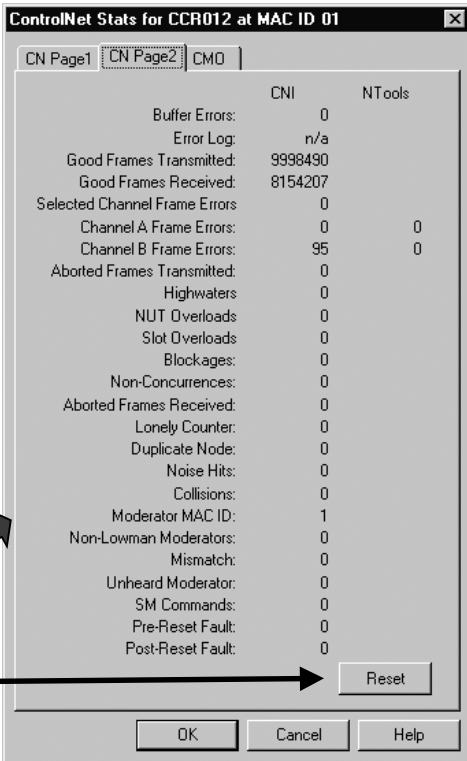


## PlantScape Ntools Familiarization

- Select the CNI card in the Detail Pane

CCR012	PR0021			IDJ161	ODJ161	DAH061	IAH061	
ACTIVE	RUN							
V4.22	50ms CEE							
AW01 W	AWPS320.0-20.1			V1.6	V1.6	V1.9	V1.9	
	BWPS320.0-20.1							

- A red box should now appear around the CNI card.
- Next select the ContrlNet Stats Icon from the tool bar 
- Then select the “CN Page2” tab
  - You should now see a display similar one the at the right
  - Note it is normal to see Frame Errors on channel B since in training we do not usually connect B cables.
- Select the Reset button 
- All Frame Errors should now be zero



ControlNet Stats for CCR012 at MAC ID 01

CN Page1 CN Page2 CMO

	CNI	NTools
Buffer Errors:	0	
Error Log:	n/a	
Good Frames Transmitted:	9998490	
Good Frames Received:	8154207	
Selected Channel Frame Errors:	0	
Channel A Frame Errors:	0	0
Channel B Frame Errors:	95	0
Aborted Frames Transmitted:	0	
Highwaters:	0	
NUT Overloads:	0	
Slot Overloads:	0	
Blockages:	0	
Non-Concurrences:	0	
Aborted Frames Received:	0	
Lonely Counter:	0	
Duplicate Node:	0	
Noise Hits:	0	
Collisions:	0	
Moderator MAC ID:	1	
Non-Longman Moderators:	0	
Mismatch:	0	
Unheard Moderator:	0	
SM Commands:	0	
Pre-Reset Fault:	0	
Post-Reset Fault:	0	

Reset

OK Cancel Help

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## Notes

### Hardware Details

Details on any module in the rack can be displayed from N-tools. The above method or a double click will display the details. The CNI has more parameters than any other module.

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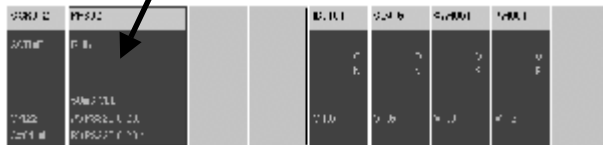
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## PlantScape Ntools Familiarization

Select the CPU card in the Detail Pane



- Next Select the Crash Block Icon from the tool bar. 

- Accept the default file name and click save.

- You should now see a text file dump similar to the one shown 

```
CPM0101:
BOOT FILENAME = cpmboot2
BOOT VERSION = PS320.0-20.1
BOOT CREATED = Tue Sep 12 10:29:40 2000
PERSONALITY = ceerex2
FILE VERSION = PS320.0-20.1
FILE CREATED = Tue Sep 12 10:50:09 2000
CR = 0x00000000 MSR = 0x00000000 HIR0 = 0x00000000 XER = 0x00000000
LR = 0x00000000 CTR = 0x00000000 SRR0 = 0x00000000 SRR1 = 0x00000000
DEC = 0x00000000 IP = 0x00000000 HSR = 0x00000000
DSISR = 0x00000000 DAR = 0x00000000

R00 = 0x00000000 R01 = 0x00000000 R02 = 0x00000000 R03 = 0x00000000
R04 = 0x00000000 R05 = 0x00000000 R06 = 0x00000000 R07 = 0x00000000
R08 = 0x00000000 R09 = 0x00000000 R10 = 0x00000000 R11 = 0x00000000
R12 = 0x00000000 R13 = 0x00000000 R14 = 0x00000000 R15 = 0x00000000
R16 = 0x00000000 R17 = 0x00000000 R18 = 0x00000000 R19 = 0x00000000
R20 = 0x00000000 R21 = 0x00000000 R22 = 0x00000000 R23 = 0x00000000
R24 = 0x00000000 R25 = 0x00000000 R26 = 0x00000000 R27 = 0x00000000
R28 = 0x00000000 R29 = 0x00000000 R30 = 0x00000000 R31 = 0x00000000
```

Application error address - 0x0

Initialized data address 0x00000000 (size 0x0)  
Uninitialized data address 0x00000000 (size 0x0)  
Stack address 0x00000000 (size 0x0)

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## Notes

### Crash Block

In some troubleshooting instances TAC may request that you send them a copy of the Crash Block file. The Crash Block file contains stack, boot, register and other information that may be useful to TAC in tracking down some problems.

**Note** - Do not send Crash Block files unless specifically instructed to do so by TAC.



**This completes....**

**PlantScape Controller Implementation**

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**Notes**