



## Q. uick Start Guide: Configuration Parameters of test.node

Purpose: test.node is a GUI that is used to configure GreenNode, a data acquisition system that is capable of recording, storing, and transmission of measurement data up to 1-2 MB/s. The status, configuration data, and measured values can all be retrieved. Basically, test.node is used to setup a configuration file in INI format. GreenNode reads this INI file at the start of its acquisition process.

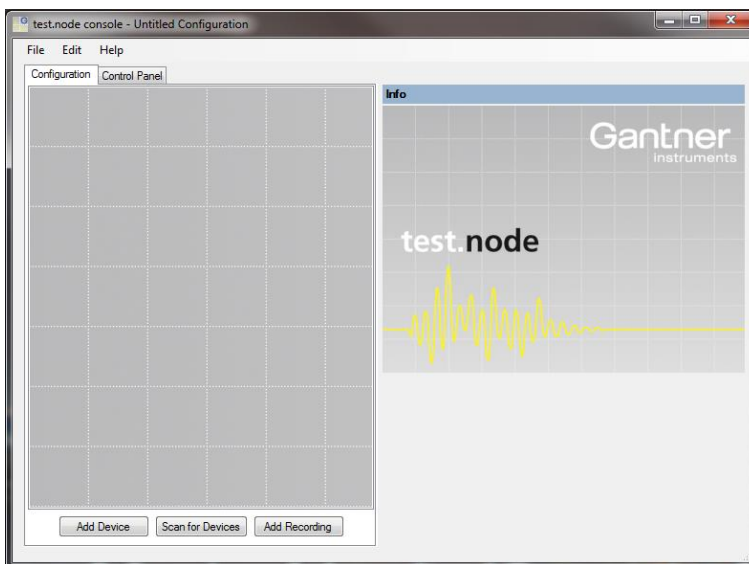
While it is possible to setup a basic configuration using test.node, there are other parameters that can be added, removed, and/or modified by editing this INI file. This INI file can be opened using Notepad.

### Procedure:

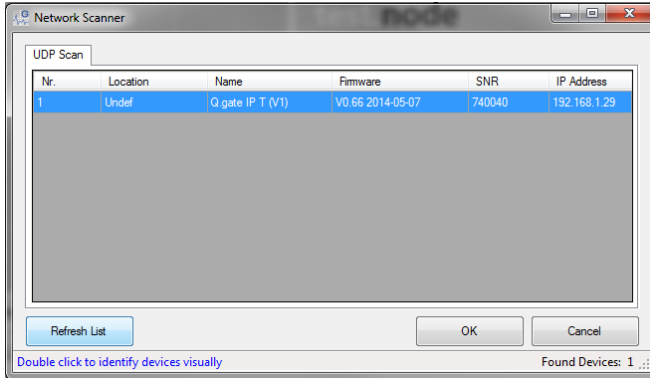
1. Download test.node from the Gantner Instruments website:  
<http://www.gantnerinstruments.com/software%20downloads/test.node.zip>
2. Install test.node on the PC.
3. Run test.node.
4. There are different versions of test.node, depending on the required number of “nodes”.

Version	# of Controllers/Nodes
test.node-1	1
test.node-5	2-5
test.node-max	Unlimited

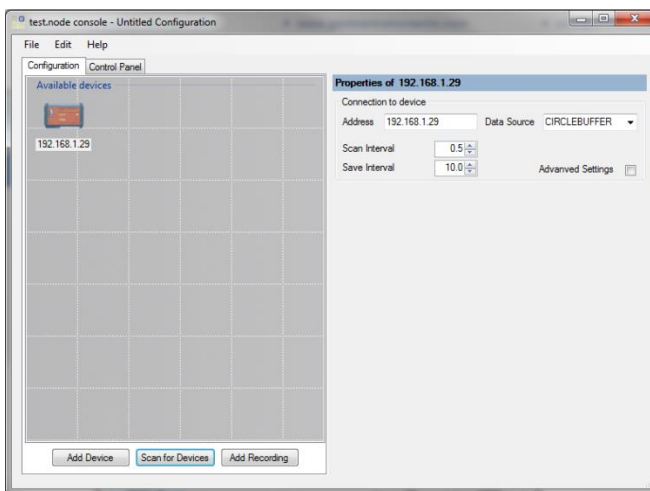
5. When test.node opens, on the Configuration tab, click on **Scan for Devices**:



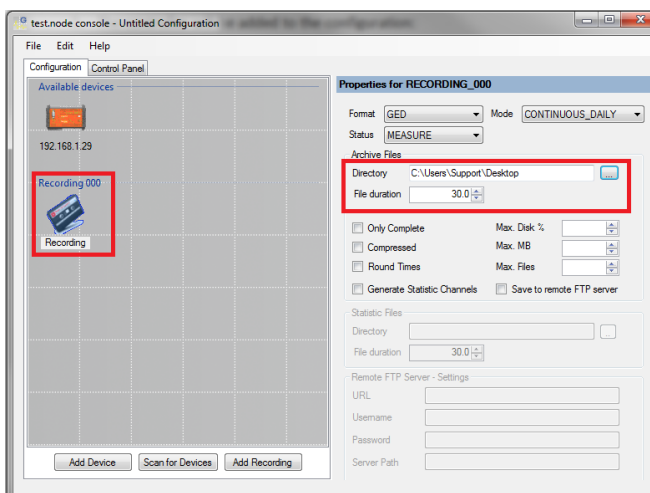
6. The Network Scanner window will appear and display all connected controllers. Select the controller and click **OK**.



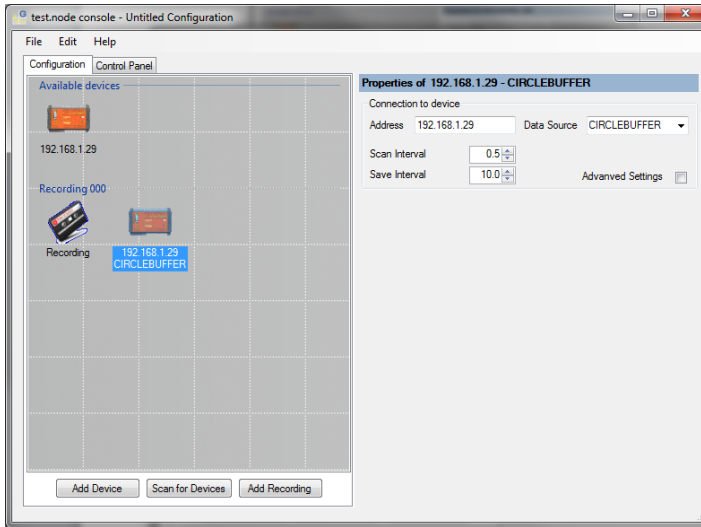
7. The controller will be added to the configuration:



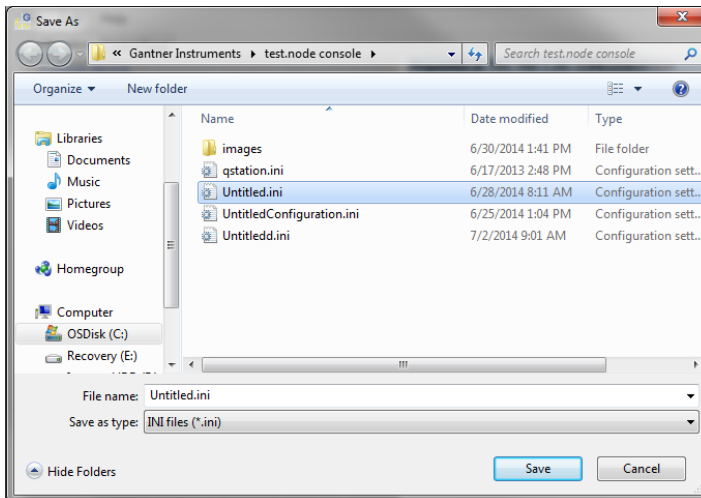
8. On the configuration tab, click on the **Add Recording** button. Select the directory where the data should be saved. Select the length for a single file in the File Duration section (in seconds).



9. Drag the controller under the Available Devices section on top of the Recording. The controller will be displayed next to the recording. Click File > Save.



- The configuration file (INI file) must be saved in the test.node directory. (C:\Program Files (x86)\Gantner Instruments\test.node console). The file name must not contain any spaces.



- After saving the file, click on the Control Panel tab. At this point, test.node can be started by clicking on the **Start test.node** button, but there are many parameters that can be modified before actually starting the acquisition process. In order to make these parameter changes, open the INI file found in the test.node directory:

C:\Program Files (x86)\Gantner Instruments\test.node console

The file can be opened using Notepad.

- Inside the file you will find several parameters that configure the entire acquisition process. Not all parameters must be used but there are several important ones to pay close attention to.



```

Untitled.ini - Notepad
File Edit Format View Help
[CLIENT_000]
DataPort=49153
SaveTimer=5.0
WriteSystemLog=0
[NETWORK_000]
Type=GANT_SOCKET
[DEVICE_000]
Type=GANTNER
Address=192.168.1.29
NetworkIndex=0
ScanInterval=0.5
SaveInterval=10.0
RealTimeFifo=1
CommunicationTimeout=10.0
DataSource=CIRCLEBUFFER
DeleteAfterRead=0
MKCode=173020
[RECORDING_000]
SaveMode=CONTINUOUS_DAILY
SaveStatus=MEASURE
SaveFormat=GED
SaveDuration=30.0
StatisticDuration=30.0
SaveDir=C:\Users\Support\Desktop
SaveOnlyComplete=0
SaveCompressed=0
SaveAtRoundTimes=0
UseDevice=0
    
```

13. The following section will describe these different parameters:

Parameters:

*CLIENT SECTION*

DataPort (Default: 49153) – This parameter defines the Green Node Data Port used. This is used for communication between Green Eye (i.e. test.viewer) and Green Node (i.e. test.node).

SaveTimer (Default: 5.0) – This parameter defines the cyclical time (seconds) in order to perform the work inside the module. Normally, this value should not be changed unless intervals smaller than 5 seconds are required.

WriteSystemLog (Default: 0) – If this parameter is set to 1, then all Green Node error messages will be stored in a Windows system/event log.

*NETWORK SECTION*

Type (Default: GANT\_SOCKET) – This is a mandatory parameter that defines the type of network. The possible values are:

- GANT\_DL\_RS232: for serial connection via ISMBUS32.DLL
- GANT\_FTP: for network connection via FTP
- GANT\_SOCKET: for fast connections via sockets

*DEVICE SECTION*

Type (Default: GANTNER) – This is a mandatory parameter used for all Gantner controllers.



**Address** – For devices that use the GANT\_DLL\_RS232 network type, this is the address of the RS485 bus. For all other network types (i.e. GANT\_FTP or GANT\_SOCKET), this is the static IP address of the controller (i.e. 192.168.1.28).

**NetworkIndex** (Default: 0) – Used if multiple networks are used.

**ScanInterval** (Default: depends on network type) – This parameter defines the time interval in which measurement data is read from a device.

1 second – for GANT\_DLL\_RS232

10 seconds – for GANT\_FTP

0.5 seconds – for GANT\_SOCKET

**SaveInterval** (Default: 10.0) – This parameter defines the time interval in which the collected measurement data is written into the archive. The default value of 10 seconds means that every 10 seconds a new data block is attached to the actual archive file. Typically this parameter does not need to be changed except when the file length is less than 10 seconds.

**RealTimeFifo** (Default: 1) – This parameter synchronizes the measurement data to the PC time. When saving data over a long period of time, using absolute time may cause problems. Synchronizing to the PC clock eliminates this problem. Activating RealTimeFifo causes a continuous time synchronization of the connected devices to the PC time.

**UseDeviceClock** (Default: 0) – When this parameter is set to 1, each measured value is assigned to the time stamp of the device. Otherwise, the values get the time stamp of the current PC time configuration.

**CommunicationTimeout** (Default: 10.0) – This parameter defines the amount of time to wait for measurement data before a timeout is recognized.

**DataSource** (Default: CIRCLEBUFFER) – This parameter defines the source of where the data is read from. By selecting CIRCLEBUFFER, the main buffer of the Gantner controller is read. Only one data source can be assigned per controller. If two data sources are required, then the device needs to be configured twice in the test.node configuration file (i.e. INI file).

**DeleteAfterRead** (Default: 0) – When this parameter is set to 1, the files are deleted on the device after reading (only in archive mode).

### RECORDING SECTION

**UseDevice** (Default: all devices) – This parameter defines the device from which the data should be collected. Multiple devices can be added to the recording, for example: UseDevice=0,1,4

**SaveMode** (Default: CONTINUOUS\_DAILY) – This parameter defines the mode in which data is saved. Only one mode can be used for this parameter. The table below shows the possible options:

Valid Values	Description
None	No archival storage (i.e. only for online monitoring)
SINGLE_SHOT	Storage of a single file, single run
SINGLE_SHOT_TERMINATE	Storage of a single file, single run and termination of measurement
CONTINUOUS_DAILY	Continuous storage in hierarchic file archive (month and day)



CONTINUOUS_MONTHLY	Continuous storage in hierarchic file archive (month)
CONTINUOUS_FLAT	Continuous storage in flat archive

SaveStatus (Default: ARMED) – This parameter describes the behavior of test.node when the program first starts. The available options:

Valid Values	Description
STANDBY	Archival storage deactivated
ARMED	Archival storage is waiting to be started
MEASURE	Archival storage starts immediately after test.node starts

SaveDir – This mandatory parameter is used to define the directory where the measurement data shall be saved.

SaveFormat (Default: GED) – This parameter defines the format which the measurement data is saved as. The available options:

Valid Values	Description
GED	test.viewer format
FAMOS	Famos format
CSV	ASCII-CSV format
MATLAB	Matlab format
DASYLAB	DasyLab format
DATABASE_BINARY	Binary database storage in BLOB fields
DATABASE_VALUES	Database storage as single value table

SaveDuration – This mandatory parameter defines the length of an archived file in seconds.

SaveOnlyComplete (Default: 0) – If this parameter is set to 1, the archive file will be written to the data directory only if it is complete. If this parameter is used, then SaveInterval will be ignored. The actual save interval will then correspond to SaveDuration.

SaveCompressed (Default: 0) – If this parameter is set to 1, every archive file will be compressed again after the last write cycle. This is possible if SaveDuration is much higher than SaveInterval or else the archive file is built from many single data blocks which can cause a bad compression.

SaveAtRoundTimes (Default: 1) – If this parameter is set to 1, the beginning and ending of an archive file will be adjusted to “round” times.

CSVPrecision (Default: 3) – This parameter adjusts the number of decimal places of the data saved.

CSVTimePrecision (Default: 0) – This parameter sets the decimal places of the time stamp.

CSVFormat (Default: CSV\_TIME) – This parameter sets the format of the time stamp column.

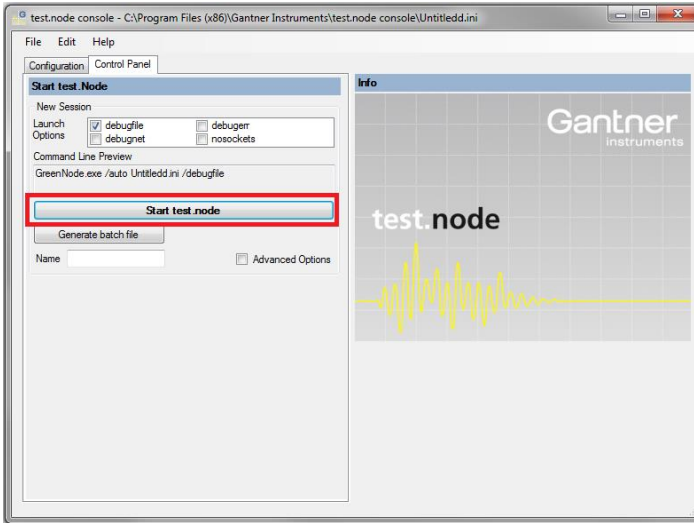
Options:

- CSV\_TIME
- CSV\_TIME\_COMBINED
- CSV\_SECONDS

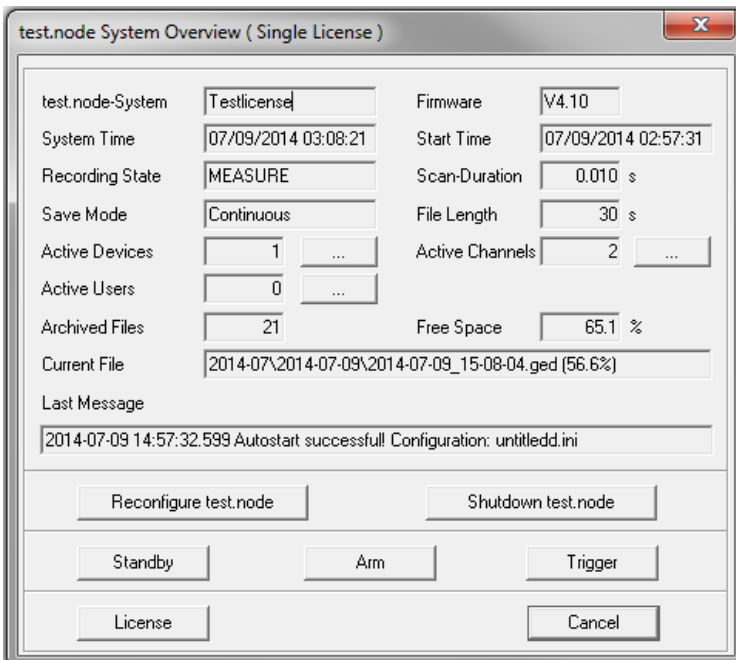


CSVXHeaderText – This parameter modifies the header of the time stamp column. The parameter is nominal, meaning this can be modified by the user. Example: Date/Time.

14. After modifying the different parameters, save the INI file. This file can now be closed.
15. Back on the Control Panel tab, click on the Start test.node button. When this button is clicked, the logging process starts.



16. Notice that in the notification area, a green turtle will appear. Double-click on this green turtle to open the Green Node window. When a copy of test.node is first used, the license must be entered before proceeding.







- System Time – Current time
- Start Time – Time when data logging started
- Recording State – Current state of test.node
- Scan Duration – Real time length of scan duration
- Save Mode – Current status of save mode
- File Length – Length of a single data file
- Active Devices – The number of controllers or “nodes” that the software is collecting data from
- Active Channels – The total number of channels between all connected controllers being saved
- Archived Files – The total number of data files saved in the directory
- Free Space – Hard drive space available on the PC
- Current File – The current file that is being saved including location and % completion of the file

To stop test.node, click on the **Shutdown test.node** button.

17. The data files can be found in the data directory:

For example, the files below are being saved in the GED format with file sizes 30 seconds long. These GED files can be opened using test.viewer. Within test.viewer, multiple files can be appended together and saved into other data formats.

Name	Date modified	Type	Size
2014-07-09_14-57-34.ged	7/9/2014 2:58 PM	GED File	48 KB
2014-07-09_14-58-04.ged	7/9/2014 2:58 PM	GED File	48 KB
2014-07-09_14-58-34.ged	7/9/2014 2:59 PM	GED File	48 KB
2014-07-09_14-59-04.ged	7/9/2014 2:59 PM	GED File	48 KB
2014-07-09_14-59-34.ged	7/9/2014 3:00 PM	GED File	48 KB
2014-07-09_15-00-04.ged	7/9/2014 3:00 PM	GED File	48 KB
2014-07-09_15-00-34.ged	7/9/2014 3:01 PM	GED File	48 KB
2014-07-09_15-01-04.ged	7/9/2014 3:01 PM	GED File	48 KB
2014-07-09_15-01-34.ged	7/9/2014 3:02 PM	GED File	48 KB
2014-07-09_15-02-04.ged	7/9/2014 3:02 PM	GED File	48 KB
2014-07-09_15-02-34.ged	7/9/2014 3:03 PM	GED File	48 KB
2014-07-09_15-03-04.ged	7/9/2014 3:03 PM	GED File	48 KB
2014-07-09_15-03-34.ged	7/9/2014 3:04 PM	GED File	48 KB
2014-07-09_15-04-04.ged	7/9/2014 3:04 PM	GED File	48 KB
2014-07-09_15-04-34.ged	7/9/2014 3:05 PM	GED File	48 KB
2014-07-09_15-05-04.ged	7/9/2014 3:05 PM	GED File	48 KB
2014-07-09_15-05-34.ged	7/9/2014 3:06 PM	GED File	48 KB
2014-07-09_15-06-04.ged	7/9/2014 3:06 PM	GED File	48 KB
2014-07-09_15-06-34.ged	7/9/2014 3:07 PM	GED File	48 KB
2014-07-09_15-07-04.ged	7/9/2014 3:07 PM	GED File	48 KB
2014-07-09_15-07-34.ged	7/9/2014 3:08 PM	GED File	48 KB