

Testing Procedures

POTTR is designed to interface and test analog telephone lines (POTS lines), which are based on 100 year old telephone technology. POTTR contains several advanced testing parameters which may be unfamiliar, but it also uses those registers internally to report a simple PASS / FAIL status, which makes SNMP monitoring simple and easy to configure.

POTTR Tests

There are two tests that POTTR performs on the phone line, a Line Voltage test and a Dialtone present test. Either test can indicate a failed line condition, so the default power-up setting is to perform both tests every 30 minutes. If both tests pass, then the line condition should be considered good.

POTTR always first checks the phone line for a "not-in-use" condition before performing any tests. This keeps POTTR from checking a phone line while it's being used, to avoid clicks and noise during an active phone call. On the other hand, if POTTR detects the phone line is continuously busy for time indicated in register maxLineBusyDuration (default 8 hrs), then POTTR will flag this as a FAIL in the Line Voltage test. The reason is that a phone line should never be 'Busy' for 8 hours straight in normal use.

POTTR Line Voltage test

When the interval timer register (testTimeInterval 46610.2.1) time passes (default 30 min), POTTR will test the POTS line for proper voltage levels. This is the Line Voltage test. If the test passes, POTTR will set the register "lineVoltagePassed 46610.3.3" = 1.

Line Voltage test DID NOT TEST

lineVoltagePassed register 46610.3.3 = 0 (enterprises.46610.3.3 = 0)

Line Voltage test PASS

lineVoltagePassed register 46610.3.3 = 1 (enterprises.46610.3.3 = 1)

Line Voltage test FAIL

lineVoltagePassed register 46610.3.3 = 2 or 3 (enterprises.46610.3.3 = 2 or 3)

POTTR Dialtone Test

If the previous Line Voltage test passes, then the Dialtone test is performed. This test takes the phone line "off-hook" and then listens for a proper dialtone on the phone line. If this test passes, POTTR will set the register "dialToneStatus 46610.3.18" = 1.

Dialtone test DID NOT TEST

dialToneStatus 46610.3.18 = 0 (enterprises.46610.3.18 = 0)

Dialtone test PASS

dialToneStatus 46610.3.18 = 1 (enterprises.46610.3.18 = 1)

Dialtone test FAIL

dialToneStatus 46610.3.18 = 2 (enterprises.46610.3.18 = 2)

SNMP read registers for proper phone line status

It is required that SNMP monitor software poll both the POTTR Line Voltage test register (lineVoltagePassed) and the Dialtone test register (dialToneStatus) to determine the status of the POTS phone line.

Check both reg: 46610.3.3 = 1 and reg: 46610.3.18 = 1 to determine a good phone line.

SNMP REGISTERS for POTTR 210

Name, Location		Description	Min	Max	Default
testTimeInterval 46610.2.1	RW	On-hook line voltage test interval (minutes)	1	2880	30
maxLineBusyDuration 46610.2.2	RW	Duration phone can be off-hook before reporting an error (minutes)	1	480	480
testOffHookCmdRequest 46610.2.3	RW	Set this nonzero to go off-hook and perform a loop current test	n/a	n/a	0
onHookMaxVolts 46610.2.7	RW	Maximum threshold (inclusive) for on-hook line voltage test to report an error	0	65535	60
onHookMinVolts 46610.2.8	RW	Minimum threshold (inclusive) for on-hook line voltage test to report an error	0	65535	1
lineBusyThresholdVolts 46610.2.9	RW	Line voltage threshold (inclusive) for detecting line busy condition	0	65535	11
maxCurrent 46610.2.11	RW	DEPRECATED	0	65535	63
minCurrent 46610.2.12	RW	DEPRECATED	0	65535	20
lastOnHookLineVoltage 46610.3.1	R	Last line voltage value read from Modem (Volts)	0		n/a
lastCurrent 46610.3.2	R	DEPRECATED	0		n/a
lineVoltagePassed 46610.3.3	R	Line voltage test results (from last test) 0 = not_tested 1 = pass 2 = fail 3 = fail_line_busy	0		n/a
loopCurrentPassed 46610.3.4	R	DEPRECATED	0		n/a
timeOfLastTest 46610.3.5	R	Time since system power-on of the last performed test	0		n/a
timeOfLastFailure 46610.3.6	R	Time since system power-on of the last failed test	0		n/a
timeOfLastOffHookTest 46610.3.7	R	Time since system power-on of the last performed off-hook test	0		n/a
lastOnHookTime 46610.3.8	R	Last time since system power-on the line was on-hook (not busy)	0		n/a
linelsBusyFlag 46610.3.9	R	Indication that the line was busy during the last voltage test	0		n/a
totalTestFailures 46610.3.10	R	Total number of failed tests since power-on	0		n/a
totalTestCount 46610.3.11	R	Total number of performed tests since power-on	0		n/a

consecutiveTestFailures 46610.3.12	R	Number of consecutive failed tests	0		n/a
failedUARTTransactions 46610.3.13	R	Number of failed transactions encountered in communication with Modem (Debug)	0		n/a
lastFailedOnHookLineVoltage 46610.3.14	R	Line voltage value that caused the last on-hook line voltage test to report failure (Volts)	0		n/a
lastFailedLoopCurrent 46610.3.15	R	DEPRECATED	0		n/a
numOnHookLineVoltageFailures 46610.3.16	R	Total number of failed on-hook line voltage tests since power-on	0		n/a
numLoopCurrentFailures 46610.3.17	R	DEPRECATED	0		n/a
dialToneStatus 46610.3.18	R	Dialtone test results (from last test) 0 = not_tested 1 = pass 2 = fail	0		n/a
numDialToneFailures 46610.3.19	R	Total number of failed off-hook dialtone tests since power-on	0		n/a

If you have any additional questions, please contact our technical support staff
techinfo@getpottr.com