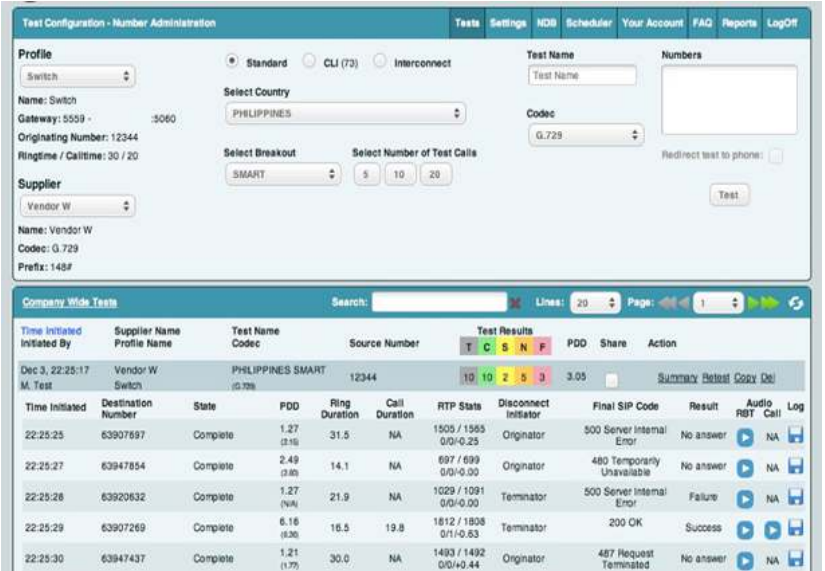


# BLUEWATER SOFTWARE SUITE WITH ITEST FOR NOC / CLI TESTING

Orca Wave's BlueWater software integrates with a best of breed voice testing platform with full integration via single sign on and most importantly, key supplier information transferred directly to your assigned iTEST software instance.

Easy to Use graphical interface, accessible from our BlueWater Software, with direct access from our BlueWater Software to iTest. This integration allows Users the benefit of loading your data once for both applications. Once in iTest, the UI shows all information necessary to perform automated tests and gather information on the QoS of the routes tested. iTEST works with all major internet browsers and tablets – allowing testing to be completed and results to be seen from anywhere. The UI only requires the input of basic information allowing any non-technical users to perform tests and check results.

Our partnership with iTest allows users the benefit of loading their data once for both applications



The screenshot displays the iTest software interface. The top section is titled "Test Configuration - Number Administration" and includes fields for Profile (Switch), Name, Gateway, Originating Number, Ringtime/Calltime, Supplier (Vendor W), and Name. It also features radio buttons for Standard, CLI (73), and Interconnect, a "Select Country" dropdown (PHILIPPINES), a "Select Breakout" dropdown (SMART), and "Select Number of Test Calls" buttons (5, 10, 20). The "Test Name" field is set to "Numbers" and the "Codec" is set to "G.729". A "Test" button is visible.

The bottom section is titled "Company Wide Tests" and shows a table of test results. The table has columns for Time Initiated, Supplier Name, Test Name, Source Number, Test Results (T, C, S, N, F), PDD, Share, and Action. The data rows show test results for various times and suppliers, including details like Destination Number, State, PDD, Ring Duration, Call Duration, RTP Stats, Disconnect Initiator, Final SIP Code, Result, and Audio RBT Call.

Time Initiated	Supplier Name	Test Name	Source Number	Test Results	PDD	Share	Action					
Dec 3, 22:25:17	Vendor W	PHILIPPINES SMART	12344	10 10 2 5 3	3.05		Summary   Refresh   Copy   Del					
M. Test	Switch											
Time Initiated	Destination Number	State	PDD	Ring Duration	Call Duration	RTP Stats	Disconnect Initiator	Final SIP Code	Result	Audio RBT	Call	Log
22:25:25	63907697	Complete	1.27 (2.16)	31.5	NA	1505 / 1565 0/0/0.25	Originator	500 Server Internal Error	No answer		NA	
22:25:27	63947854	Complete	2.49 (3.8)	14.1	NA	697 / 699 0/0/0.00	Originator	480 Temporarily Unavailable	No answer		NA	
22:25:28	63920632	Complete	1.27 (NA)	21.9	NA	1029 / 1091 0/1/0.00	Terminator	500 Server Internal Error	Failure		NA	
22:25:29	63907269	Complete	6.16 (8.36)	16.5	19.8	1812 / 1808 0/1/0.63	Terminator	200 OK	Success		NA	
22:25:30	63947437	Complete	1.21 (1.7)	30.0	NA	1493 / 1492 0/0/0.44	Originator	487 Request Terminated	No answer		NA	

## KEY ELEMENTS

- Detailed NOC and CLI testing with in-country, per mobile operator equipment
- Simple test setup and scheduling
- Fast results, recorded forwarding and opening ticket with supplier
- Easy to implement
- Fully integrated with Orca Wave BlueWater software for supplier information transfer

# FEATURES

- **Standard Tests:** Each Test is usually 5 calls, but you can set this number to as many as you require (up to a maximum of 100 per Test).
  - PDD - Standard - i.e., when switch tells us the call is ringing
  - PDD - User - i.e., when the iTest algorithms detect a that the end user is hearing a ring tone on the live audio)
  - Average PDD over the Test calls
  - Ring Time
  - Call Time
  - Packet Loss
  - Jitter
  - Out of Sequence Packet monitoring and reporting
  - MOS Scoring
  - Disconnection message via final SIP Code
  - Ring Tone Quality - Recordings of the end Ring Tones
  - Call Quality - Recordings of the Call Audio
  - Total Calls made
  - Calls Connected
  - Calls Failed
  - Calls Not Answered
  - FAS detection - Early Charging (i.e., Ringtone being presented after the switch sends the "Call Connected" SIP message 200)
  - Dead Air (i.e., call connected but no return Audio / RTP Stream)
  - No Ring Back Tone (i.e., no Ringtone is presented before call is answered by the end party)
  - Detailed SIP Log for each call within the test showing all the SIP messages between the switches for each call.
- **CLI Tests:** Each Test is usually 10 calls, but you can set this number to be 1, 5 or 10 calls as part of a single CLI Test.
  - Everything in the Standard Test above, plus....
  - CLI presentation (number sent versus number presented)
  - FAS detection - (Late Charging and Early Charging as well as Call Hijacking) False message or IVR Systems i.e., when a carrier connects the call to a false End point
  - CLI Prefixes - i.e., 00(Country Code) (End Number) is acceptable, but 0+ (Country code) (End Number) may not be - you can set what you discern as acceptable.

- **Automated Simultaneous Test Calls:** Once a test has been initiated, multiple calls are placed simultaneously and once complete all call statistics are displayed. This includes PDD, ring time, call duration, number of packets, jitter and packet loss and an audio recording of the early media (ring back tone) and call. This allows testing to be completed in a fraction of the time of manual testing and gives you all the necessary tools to analyze the results. It also allows for routes to be checked under more load than by manual testing. The full sip details of the call are also logged and can be downloaded for more in-depth analysis. G.711 and G.729 codecs are supported for test call sand can be set at a vendor or test level.
- **Scheduled Test Calls:** As well as manual tests, it is also possible to set up test schedules, allowing calls to be initiated automatically. The results are emailed once complete. These tests can recur on a daily, weekly, monthly schedule or even for as often as every 5 minutes until the desired number of tests has been run or the schedule end time occurs.

The screenshot shows the 'Test Scheduler' interface with a 'New Schedule' form. The form is divided into several sections: Profile, Supplier, Test Configuration, Repeat Settings, and Email Alert Settings. The Profile section includes Name (Switch), Gateway (5509), Originating Number (12344), and Ringtime / Calltime (30 / 20). The Supplier section includes Name (Vendor W), Codec (G.729), and Prefix (1488). The Test Configuration section includes Number Selection Method (Live Number Data Base), Select Country (GHANA), Select Breakout (SIP), Select # of Test Calls (5), Test Name (Ghana Test), and Codec (G.729). The Repeat Settings section includes Start Date (December 2013), End Date (December 2013), Repeat Frequency (1 Day), and Repeat Quantity. The Email Alert Settings section includes Send alerts, Alert on FAS, Alert on No RBT, Alert on Dead Air, Alert on Calls Fail, Alert on Average PDD, Alert on CLI Failure, and Schedule run information.

- **CLI Country support:** Multiple networks in different countries are currently on the iTest CLI network and with an extensive rollout continuing in 2021, CLI tests are increasingly available throughout the world. Ask for the most recent country listing.

## About

Orca Wave is an experienced team of telecom professionals whom have worked together in the international and domestic telecom space since 1997. In 2002, Orca Wave was formed by John Rivenburgh and Jeri Wait. Orca Wave's BlueWater Software provides real time, intelligent solutions, architected to accelerate any world class carrier to global leader, as measured by quality, profit and revenue. To date the software platform has been the engine for some of the leading Global Carriers and Innovative new market entrants that are wholesale, wireless, application and VoIP providers.

Please contact [Sales@OrcaWave.net](mailto:Sales@OrcaWave.net) to learn more and reviewing an online demo.