



# Test Automation Solutions

## *for Network Equipment Manufacturers*

“ TestShell is an enterprise-wide automation platform and business intelligence solution that will help us maintain our leading market position... With TestShell, test design is accessible to all our QC and product development personnel - **reducing testing time and cost and vastly improving efficiency...** ”

Uri Shabi, R&D, RAD Data Communications

QualiSystems

Standards of Excellence

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## Network Equipment Manufacturers Testing Challenges

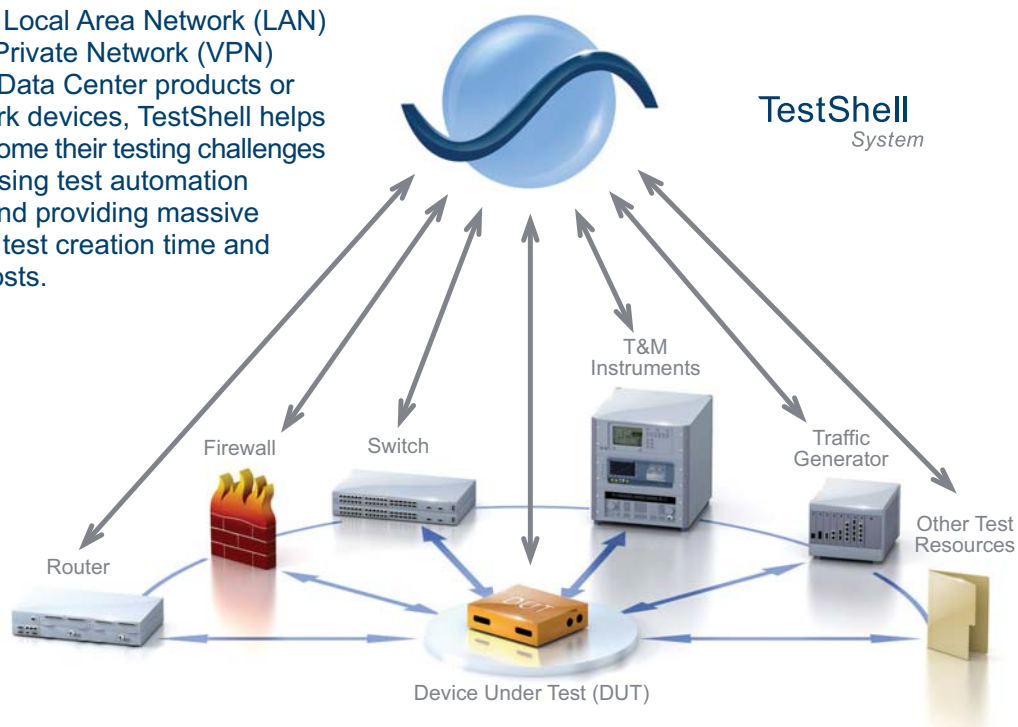
Network Equipment Manufacturers (NEMs) are facing growing testing challenges. The need to continuously improve core product quality and performance, while network complexity is constantly rising, makes testing processes intricate and time consuming.

- Testing across a wide variety of network protocols requires long setup and configuration processes
- The combination of hardware, software and firmware components makes it difficult to test the equipment as a single integrated system, and often requires manual intervention
- Streamlining remote manufacturing processes lengthen the testing process and make it difficult to meet tight time-to-market requirements

These challenges impacts NEMs ability to respond to market demands for constantly upgraded product features and technologies.

## TestShell for NEMs

Whether for Local Area Network (LAN) and Virtual Private Network (VPN) equipment, Data Center products or other network devices, TestShell helps NEMs overcome their testing challenges while increasing test automation coverage, and providing massive reduction in test creation time and overhead costs.



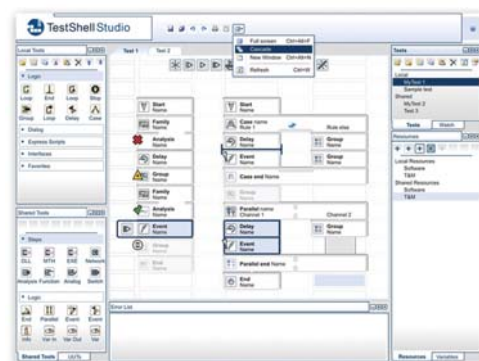
### Fast and easy programming free test creation in complex environment

TestShell provides a simple way to create complex code-free test scenarios, slash test overhead expenses and empower QA teams to create tests in-house.

#### TestShell offers:

- A user-friendly graphical UI requiring no programming skills
- Flowchart-like test scenarios display for at-a-glance comprehension
- Editing and updating of tests with minimal effort
- Coordination and execution of parallel actions in an intuitive visual manner

- Simple event driven and linkage capabilities
- Built-in logic and test-flow control tools
- Complete marshaling of information within and between tests via a powerful variables engine



## Automated test setup

Significantly reduced test duration, optimized test operations and coverage:

- Complete automation of test setup and configuration prior to testing
- Created tests are standardized for maximum flexibility, and can easily be re-used
- Multiple test stations are controlled simultaneously from a single central server



## Built-in support for key technologies

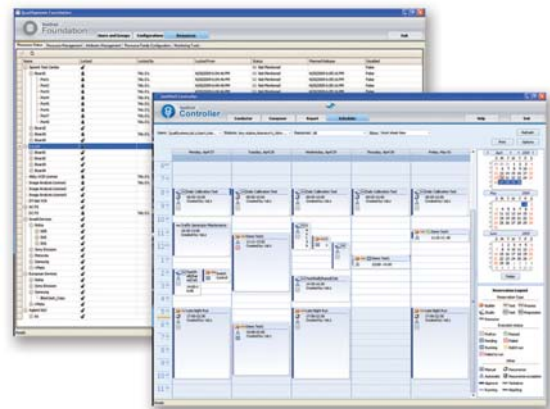
- **Robust script automation** - TestShell streamlines multiple script management and dynamically modifies them for easy reuse based on parsing capabilities. Supported scripting languages include Tcl, JavaScript, VBScript, Perl, Batch Files and more
- **Wide protocol support** - TestShell supports any type of network protocol including transport-layer protocols (e.g. UDP, TCP/IP), application-layer protocols (e.g. HTTP, SNMP, Telnet, FTP/TFTP), CLI and numerous communication buses
- **Broad test & measurement instrument and networking equipment support** - In addition to traditional lab instruments TestShell offers full control of networking equipment from various vendors including traffic generators, switches, routers, load testers and many others

## End-to-end test coverage

- Design Verification and Validation testing
- Functional testing (unit, feature, system)
- IP performance
- Load and Stress testing
- Regression testing
- Integration testing
- Field Support

## Tests, lab and resources management

- Regressions, tests and functions are stored in a central database for easy cross-organizational and multi-site sharing
- Automatic synchronization of tests and test data, even from remote sites
- All test assets are managed in a flexible hierarchy over a network environment
- Smart scheduling and coordination capabilities of tests, assets and test resources among stations maximize utilization, saving time and costs



## Advanced data collection and analysis

In addition to test data manipulation capabilities during test creation and run-time (such as parsing capabilities and the use of validation rules), all data and test results are stored in a central database, ready for insightful trend analysis and powerful business intelligence:

- Data collection from all tests, log files and other inputs is easily handled
- Built-in mathematical and statistical tools allow quick and advanced results analysis
- Fully Automated reporting and results sharing
- Powerful Query Builder allowing users to mine any information from the database
- Real-time dashboard display of test data, generated from both OLAP-based and direct online queries



## TestShell

- All inclusive** A single framework reduces bureaucracy and improves collaboration
- Scalable** Vendor agnostic integration to any test equipment
- Dynamic** Flexible test environment simplifies modification and regression
- Easy to use** QA team independency saves time and overhead costs

### About TestShell System

TestShell is an end-to-end test automation solution compatible for testing virtually any hardware, device or embedded system. While providing **code free test authoring, automatic test execution, advanced test management and comprehensive test reporting and analysis**, TestShell helps equipment manufacturers and service providers to **improve product quality, shorten time to market and significantly reduce capital and operational expenditures.**

### About QualiSystems

QualiSystems is a test automation pioneer. The test automation world is evolving from a collection of various tools to an enterprise quality management platform. QualiSystems' mission is to provide equipment manufacturers and service providers with unparalleled Test Automation solutions that drive innovation, efficiency and ROI. QualiSystems' TestShell is used by leaders in diverse industries including telecommunications, mobile, aerospace and defense, automotive, basic-electronics, medical devices and others.

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