

Test Automation for Mobile Devices

HP QuickTest Professional software and DeviceAnywhere solutions

Data sheet



Testing challenges for mobile applications

The abundance of handsets available today is great for consumers and the mobile industry—but can be a headache when it comes to the testing and deployment of applications. Mobile companies must provide applications that are compatible across devices that often have varied form factors, features, operating systems, and processing capabilities.

New technologies, along with the extensive variety of devices and configurations, pose additional challenges for mobile application testers. With so many smartphones, mobile phones, and PDAs on the market, how do you ensure that your applications will work as expected on all of them? How can you test them on all popular mobile operating systems and keep current with the new OS (operating system) versions as they become available? How can you create a test set that would run through all common business transactions on a mobile device with hundreds of different sets of data to check for errors?

The answer to these questions lies in mobile device test automation. Only by investing in a test automation strategy and solutions can you create a comprehensive approach to mobile application quality and reliability. By implementing device-agnostic end-to-end testing solutions, you can say with confidence that your mobile applications will work on any device, with

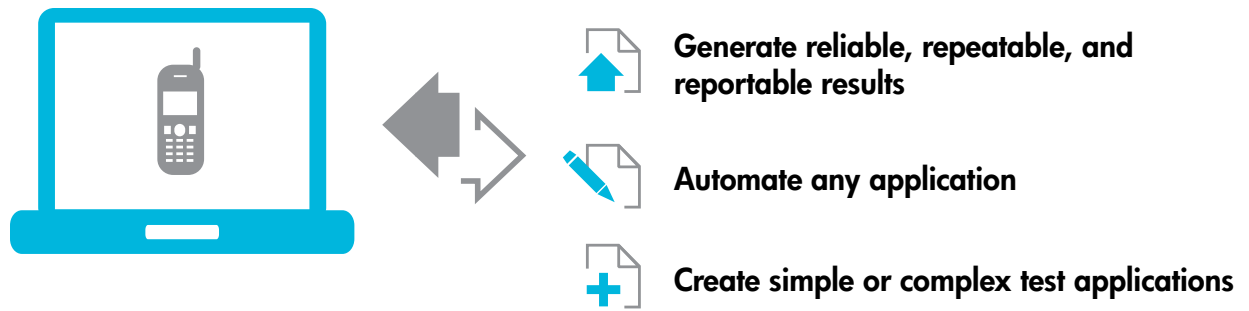
any language, any configuration, and on all popular operating systems. Build your test sets once and run them on every new version of the application. By creating scripts that are easy to maintain and reuse, you can ensure that your mobile applications do not cause costly business interruptions or have a negative impact on customer experience.

Mobile application test automation solution from HP and DeviceAnywhere™

HP Software provides the most advanced automated functional and regression testing solutions that support all major software applications and environments. Through partnerships with cutting-edge innovative companies such as DeviceAnywhere (formerly Mobile Complete), HP is extending its industry-leading functional testing capabilities to mobile applications.

DeviceAnywhere Automation is an intelligent and comprehensive platform that allows you to create and run automated tests on over 2000 real devices connected to live global networks. It combines the convenience of automation software with the accuracy of real devices to generate reliable, repeatable, and reportable results. And with over 2000 different handset models from around the globe, DeviceAnywhere's phone bank gives you access to any device you require across all major global network operators.

Figure 1: DeviceAnywhere delivers solutions for creating and running automated tests on a variety of devices and networks.



DeviceAnywhere has integrated its mobile test automation platform with HP QuickTest Professional (QTP) to enable testers to access DeviceAnywhere through their QTP environment, which lets them apply their QTP skills to build reusable mobile testing assets. Testing thousands of different mobile devices manually is time consuming and costly—if not completely impossible. Constantly changing and evolving networks, configurations, form factors, and operating systems add to the challenges of mobile device testing. The combination of HP market leading QTP testing platform and DeviceAnywhere’s extensible mobile device automation platform provide the tools your team needs to create a comprehensive solution for confirming the quality of your mobile applications.

Building test scripts for mobile applications

DeviceAnywhere (DA) Automation generates executable test scripts that perform the same action that a real user would while operating a mobile device—press device buttons, connect/disconnect batteries, open/close flip phones, or operate any hardware controls available on the device. Test scripts can be executed on local or remote handsets.

To create a new QTP test, a tester simply opens the Object Repository and creates a new DeviceAnywhere Pro object to represent a DeviceAnywhere device by specifying a unique device identifier. The user can then reference these objects to build test steps—for example, call a specific action that was recorded in DA Studio. After generating several Action steps, the user has created a mobile device script that can be executed from QTP.

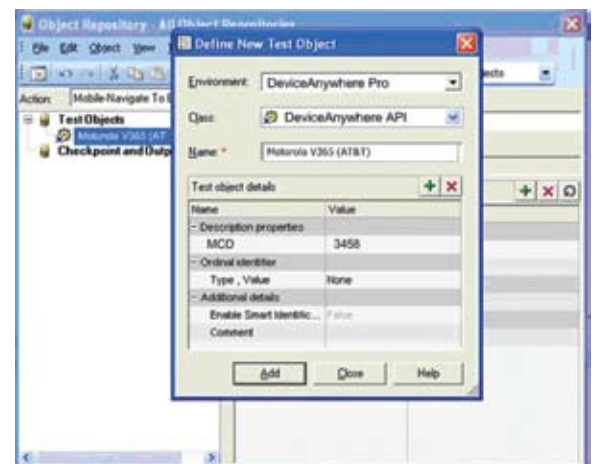
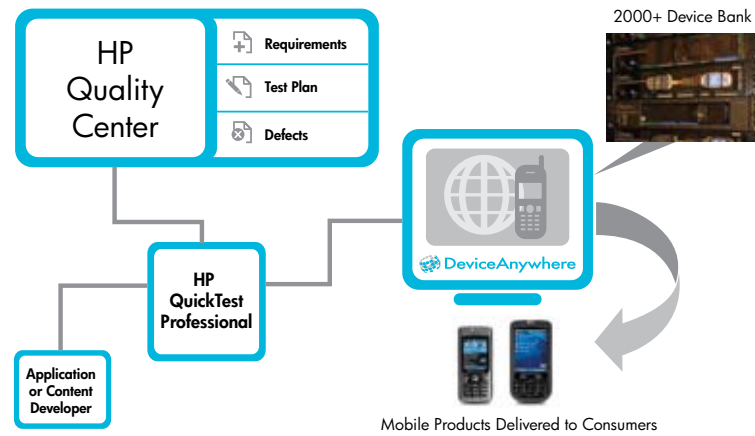


Figure 2: DeviceAnywhere has been integrated with HP QuickTest Professional to provide comprehensive functional testing capabilities for mobile applications.



DeviceAnywhere Automation also allows you to define unique attributes of a device, such as the home screen image and the series of keystrokes it takes to get to the messaging menu. By leveraging these unique attributes in device-agnostic scripts, you can execute the same test case across several different devices with minimal script maintenance.

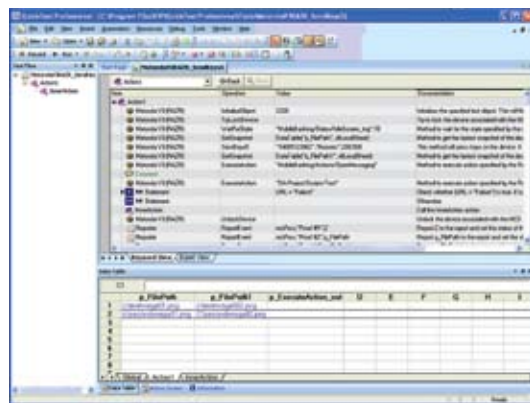
Replaying the test scripts

While the QTP script containing DeviceAnywhere Plug-in operations is running, testers can access DeviceAnywhere Automation's web-based dashboard to get a detailed view of the device that is being manipulated by the test.

The dashboard records all test steps screen by screen, allowing users to review and analyze test results and share them with the team. A link to the test results is also available through the QTP Test Results view to give testers as much information as possible about the test execution and what—if any—issues were found.

This solution of HP QuickTest Professional together with the innovative DeviceAnywhere Automation technology allow testers to extend automation best practices from the desktop world to the new, emerging world of mobile applications. In addition, through seamless integration with HP Quality Center—the leading test management software—test engineers can build a central repository of mobile test scripts. This allows every member of the QA team to reuse test scripts, reduce duplicate work, and significantly simplifies test maintenance. You can manage all your testing assets from a global, web-based central location to promote collaboration between workgroups, reuse tests between builds and applications and perform advanced change and impact analysis.

As these applications continue to become more popular, more and more companies will invest in mobile test automation to improve quality, reliability, and performance of their solutions.



About DeviceAnywhere

DeviceAnywhere (formerly Mobile Complete) is the award-winning provider of end-to-end solutions for mobile application testing, test automation monitoring, and development worldwide. The company's proven test automation solution allows organizations to cut operational expenses and time associated with testing mobile applications. DeviceAnywhere helps companies of all sizes bring their products, services, and IT applications to the mobile platform.

For more information:

For an overview of HP Quality Center, visit:
www.hp.com/go/qualitycenter

For detailed information on HP QuickTest Professional software, visit:
www.hp.com/go/functionaltesting

For information on DeviceAnywhere, visit:
www.deviceanywhere.com

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