

The Accenture logo, featuring the word "accenture" in a white, lowercase, sans-serif font. A small blue chevron symbol is positioned above the letter "u".

accenture

The StormTest logo, consisting of a blue circular icon with a white stylized "S" shape inside, followed by the word "StormTest" in a white, sans-serif font.

StormTest

A large, solid blue chevron shape pointing to the right, positioned behind the text.

High performance. Delivered.

# Black Box Testing

With Accenture StormTest

## The Validation Challenge

Video Service Providers' TV services and products are rapidly evolving. However, as they add new or improved functionality, often driven by internet connectivity, operators place increasingly tough demands on their Development and Quality Assurance (QA) teams to validate hardware and software builds and releases. In particular, it's become much more difficult for Video Service Providers to quickly deliver reliable, quality services and products because of:

- Growing complexity of platforms and builds they must support
- Increase in the number of releases per year
- Pressure to reduce test cycle time to expedite releases
- Inconsistency in how different testers, teams and sites apply various testing scripts, standards, and approaches
- Rapidly evolving EPGs often driven by Ethernet-enabled features
- Need to broaden and deepen test coverage

StormTest gives operators a reliable, repeatable, and automated way to confirm the functionality of their products and services.

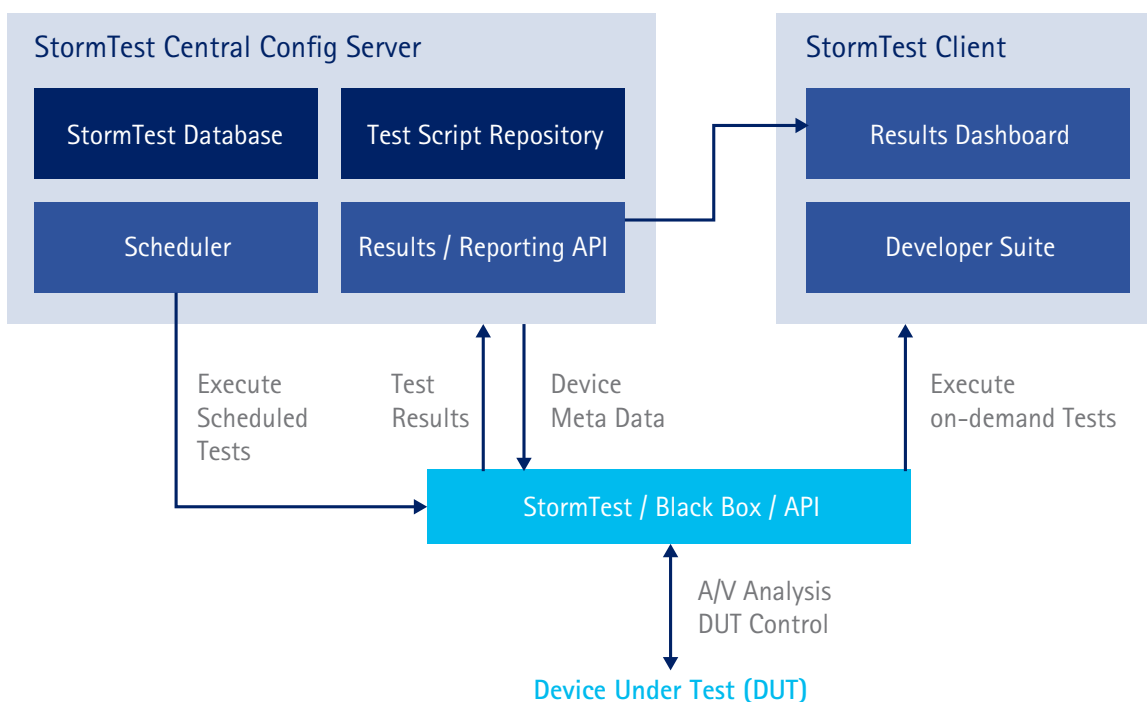
## Automated Black Box Testing

Accenture StormTest from Accenture Digital Video, helps Video Service Providers address these challenges head on. This video test platform automates the Black Box testing of Consumer Premises Equipment (CPE) and simulates user interactions with the CPE to help ensure that functionality and performance meet specification. It supports scripting, scheduling, executing and reporting of tests of EPG, A/V performance, channel bouquets, parental controls, and much more. And it helps to increase the test coverage for product and service releases across different CPE platforms, expedites test cycles, and ultimately improves the quality of video services.

StormTest gives operators a reliable, repeatable, and automated way to confirm the functionality of their products and services by:

- Supporting a wide range of interfaces to ensure that CPE and service functionality are comprehensively tested
- Providing easy-to-use test script tools that support self-sufficiency in test scripting, execution and maintenance
- Supporting both SD and HD device interfaces
- Powerful video and audio capture and analysis
- Maximizing the use of available test target devices through advanced test scheduling
- Allowing independent testing and control of all devices under test

## Accenture StormTest: Black Box



- Measuring the performance of any on-screen visible change (e.g., zap timing)
- Providing remote access to accommodate physically separate tester and device locations
- Integrating with leading defect and test management systems
- Delivering integrated logging to make it easier to find and resolve errors

Depending on the StormTest hardware model, one can test either one, four, or 16 devices; multiple units can be combined to form larger-capacity “facilities.” Server software controls all the hardware and devices in the hardware test unit and manages a central repository of test scripts and a central database of test results. Power, IR and serial inputs to each of the test devices can be controlled, and the video, audio and serial outputs from them can be analyzed and recorded separately and simultaneously. A Client API allows test scripts to interact with the server software, while a number of graphical tools directly control the devices connected to StormTest to create and schedule tests and view the results of those test runs.

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## Comprehensive, Accurate, and Faster Testing

Black Box testing with StormTest supports Development and QA teams, who are concerned about functional and non-functional requirements and how they affect the end-user experience; as well as System Integration groups that must validate the functionality of builds and releases. Specifically, StormTest:

- Accelerates test release cycles by automating functionality testing and, thus, freeing up Development and QA teams to focus on fault diagnosis
- Improves product quality by broadening test coverage of EPG, PVR, A/V, DRM/CA and much more
- Accelerates error detection and analysis with integrated logging

- Ensures accurate test results with industry-leading OCR and image capture tools
- Rapidly creates new test cases via a powerful test authoring environment
- Provides detailed performance metrics for monitoring and improving the customer experience

## A True End-to-End Validation Platform

Accenture StormTest uses advanced automation technologies to continuously and actively test new service releases across platforms and devices, in development and deployment. The insights it provides helps organizations to accelerate service innovation, optimize development processes and ultimately improve the viewer Quality of Experience.

### Solution Details

StormTest includes numerous advanced features that support improved Black Box testing:

- OCR provides highly accurate onscreen text capture and comparison with reference text
- Advanced image handling enables comparison of expected versus actual on-screen graphics
- Navigator, an intuitive GUI, simplifies navigation map creation and maintenance
- HD A/V capture and analysis performs detailed A/V analysis, simultaneously and independently for all devices
- Synchronized and integrated video logging combines and synchronizes video file, serial log and test script
- Video quality analysis identifies encoding and decoding A/V problems that could affect the customer Quality of Experience (QoE)
- Facility-wide test scheduling supports numerous types of scheduling from one-off to regular
- Performance measurement with frame accurate timing of events such as channel change and on-screen display refresh
- Centralized results storage and reporting provides detailed report generation and export capabilities across all test activities

## About Accenture Digital Video

Accenture Digital Video is a business unit within Accenture. We deliver business results for companies where video is of strategic importance, helping them pivot to capture new growth opportunities in an ever changing market. Partnering with clients, we use our agile methodologies, deep skills, and open technology platforms and apply them in every phase of a change journey—from thinking to doing. The end result: more predictability in the face of a complex and volatile landscape. Accenture Digital Video has a 20 year track record in driving video innovation through a global workforce of more than 2,000 dedicated professionals across strategy, delivery, business services and operations, all dedicated to helping clients grow profitably.

## About Accenture

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions—underpinned by the world's largest delivery network— Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With more than 375,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at [www.accenture.com](http://www.accenture.com).