UTAP UNIFIED TEST AUTOMATION PLATFORM

A platform to automate complex end to end test cases

UNIFIED TEST AUTOMATION PLATFORM
The Journey of HCL's Telecom Media & Entertainment Business vertical

Today, testing is siloed and confined. Test teams select a test tool or test framework, and then interrogate and assess product functionality and reliability based on what their selected tool allows. Test frameworks channel testing direction and confine the breadth of the testing.

Moreover, in today's world Telecom/Media/Entertainment service providers face a perennial challenge of converting complex scenarios into a set of actions enabled by a plethora of tools.

PQA Director

How can we ensure zero tolerance on our critical applications and keep the CST high?

CIO

How can we certify application with Better - high quality, faster – less cycle time, cheaper – low cost?

Test Manager

How can we goto market quickly with high quality?

How can we automate all our complex end to end test cases?

Product owner

Test professional 1

Wouldn't it be great if we could recreate this use case and place the unit under test in this state?

Test professional 2

Well yes, but our test tools don't have that flexibility.

This exchange happens frequently within test and quality assurance teams, and inevitably, the optimal test they really want gives way to what the chosen test tools allow. Our new Unified Test Automation Platform (UTAP)unleashes your test function by integrating and embracing multiple test tools and frameworks without committing your entire test organization to learning and relearning a test tool control language. Instead, test tools and frameworks connect to the UTAP's orchestration engine and your test team programs this engine by dragging and dropping test "objects" into workflows.

In other words, UTAP provides a platform for testers to create Automation Test Cases using a business flow model with re-usable actions that represent the actual steps in the execution of a test.

FOR THE SERVICE PROVIDER, THIS MEANS ENABLING TEST AUTOMATION OF COMPLEX END-TO-END TEST CASES ACROSS ENTIRE LIFECYCLE OF CONTENT CREATION, DISTRIBUTION AND CONSUMPTION.

UTAP ARCHITECTURE

The engine connects to every test tool and framework while presenting a common language and interface to test creators and test execution staff. Your test organization engages a drag-n-drop web user interface to feed test steps into the UTAP, and then its engine translates the desired test steps into test tool specific routines for execution. This ensures adherence to your enterprise's standards and promotes reuse of test routine best practices. In addition, UTAP's test designer and test executor interfaces align to the strengths of your workforce. Next, UTAP, through a publish/subscribe pattern or query interface (depending on test tool),learns the outcome of the test case execution and updates your test results repository such as Jira.
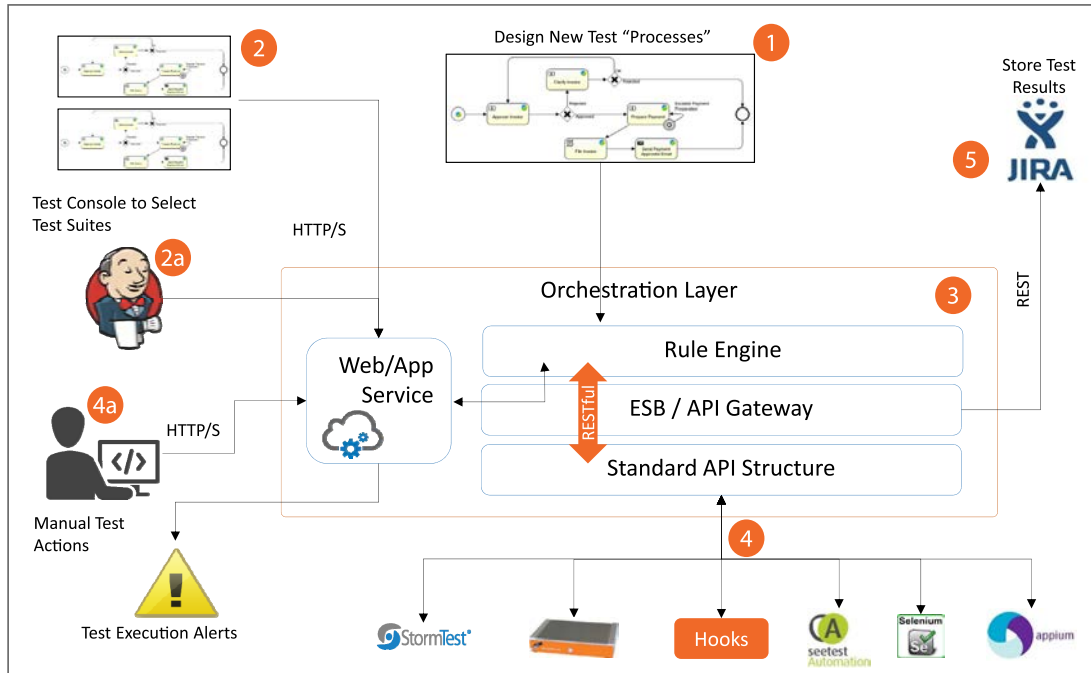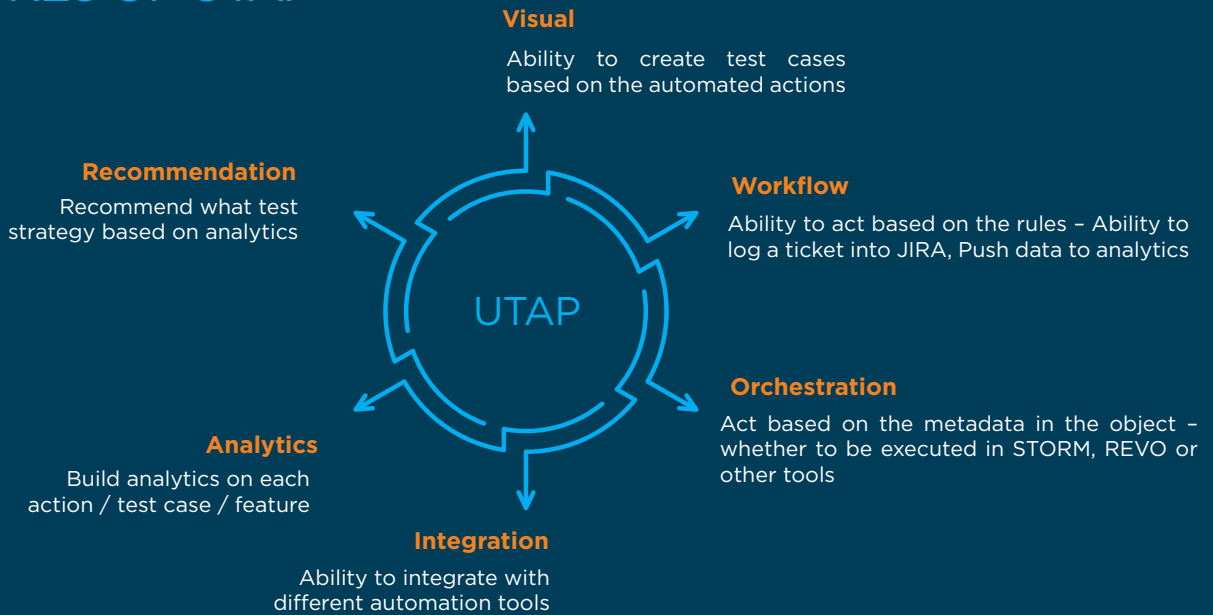

1. Design the workflow using Activiti / BPMN.io

2. Use TestConsole to select the Test Suites to be executed in a run via Jenkins (2a).

3. The Orchestration Layer shall be the interface to execute tests on various test beds.

4. Possibility of running on Storm, Revo, Appium, SeeTest and other test beds along with an interface for Manual Test actions (4a).

5. Test results stored in JIRA for Triaging.

GETTING STARTED WITH UTAP

UTAP is virtualized and offered in both on-premises and cloud consumption models. The UTAP engine may be virtualized on VMware vSphere or OpenStack KVM. UTAP's associated test steps and test cases are stored as Business Process Model Notation documents in a document-oriented database. First step is to analyze your current test suites for test step and test case similarity then create those steps and cases in UTAP's designer web interface. Those test steps are now UTAP objects that your engineers arrange into test cases and test suites. UTAP includes test tool adapter API's for Appium, See Test, Selenium, Storm Test, and Revo. Other API adapters are possible so please work with our test integration architects to define your adapter needs.

FEATURES OF UTAP

Visual
Ability to create test cases based on the automated actions

Recommendation
Recommend what test strategy based on analytics

Workflow
Ability to act based on the rules – Ability to log a ticket into JIRA, Push data to analytics

UTAP

Orchestration
Act based on the metadata in the object – whether to be executed in STORM, REVO or other tools

Analytics
Build analytics on each action / test case / feature

Integration
Ability to integrate with different automation tools

BENEFITS OF UTAP

Increased Test Tool Utilization

UTAP's Orchestration Layer understands the capability of every attached test tool and framework. It uses this knowledge to distribute test case and test step execution so the utilization of every attached test tool is maximized.

Simplified Test Case Creation

Test step repeatability and reuse is cataloged during UTAP integration. This catalog knowledge provides your test staff the ability to combine predefined test steps into test cases without needing to revalidate the capability of every step.
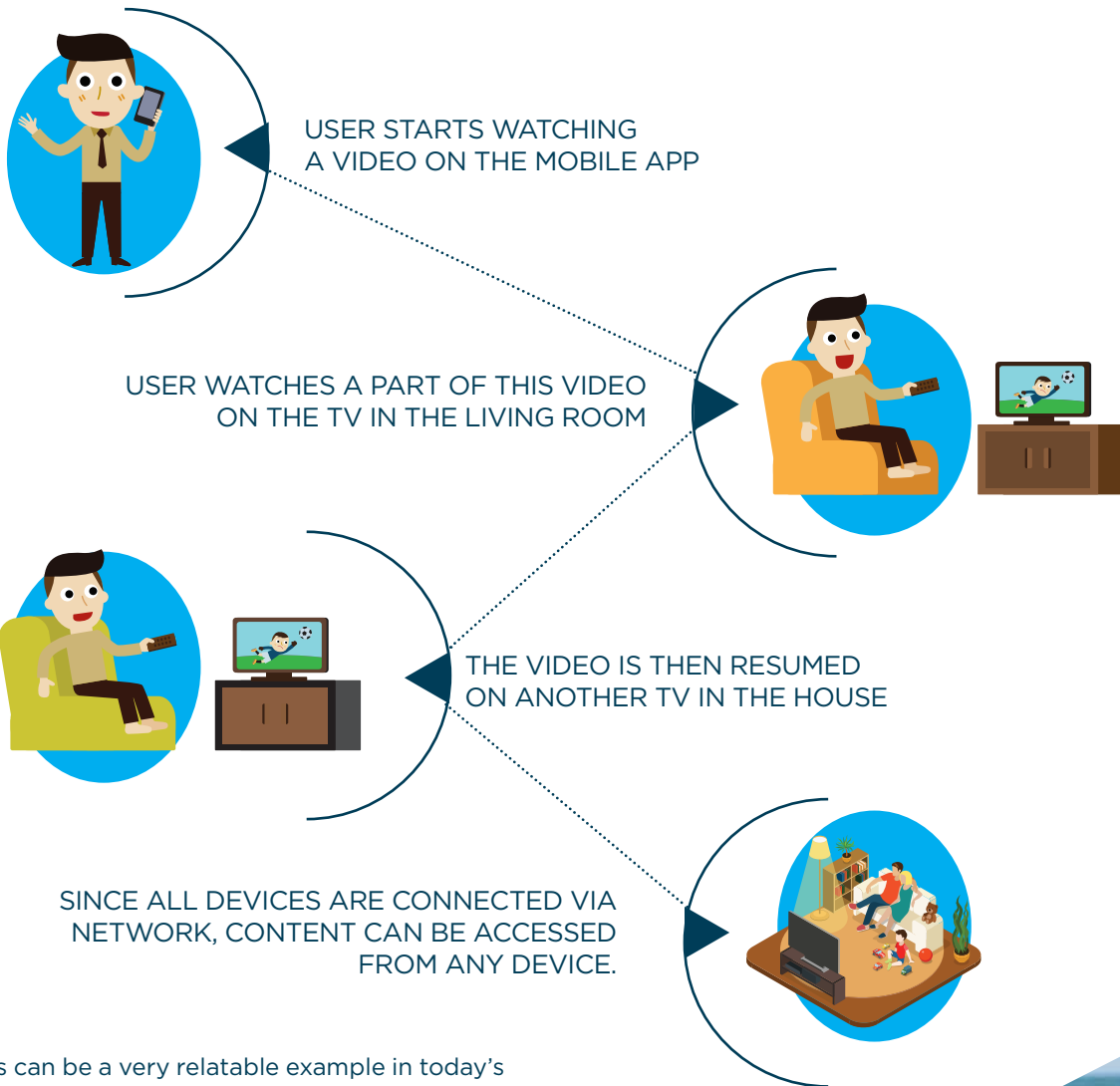
Expedited Test Results

UTAP executes test in parallel and continuously so test runs execute throughout the day independent of test staff's availability. This unmanned test execution triggers alerts when faults are encountered or test case execution logic delivered unexpected results so administrative staff may intervene and remediate issues.

Enhanced Test Execution Accuracy

UTAP mechanizes and reliably conducts the defined test steps without misinterpretation or accidental omission. Every test step execution is recorded and auditable delivering confidence and supporting validation by outside accreditors and auditors.

Handles all the tools and devices seamlessly.

Reusability will reduce time taken to set the automation and simplify the debugging of errors

Usability by non technical team due to reusable assets of actions

UNIFIED TESTING

HIGHER PRODUCTIVITY

RESOURCE MANAGEMENT

A SAMPLE COMPLEX USE CASE

USER STARTS WATCHING
A VIDEO ON THE MOBILE APP

USER WATCHES A PART OF THIS VIDEO
ON THE TV IN THE LIVING ROOM

THE VIDEO IS THEN RESUMED
ON ANOTHER TV IN THE HOUSE

SINCE ALL DEVICES ARE CONNECTED VIA
NETWORK, CONTENT CAN BE ACCESSED
FROM ANY DEVICE.

This can be a very relatable example in today's time. The growing scope of content and network providers pave path for a complex ecosystem. Consider end users with cable television set top boxes, internet connection (routers), and mobile devices from the same provider. UTAP in this scenario would enable to embed separate test cases on different tools with the help of adapters onto the UTAP engine, thus limiting the number of activities.
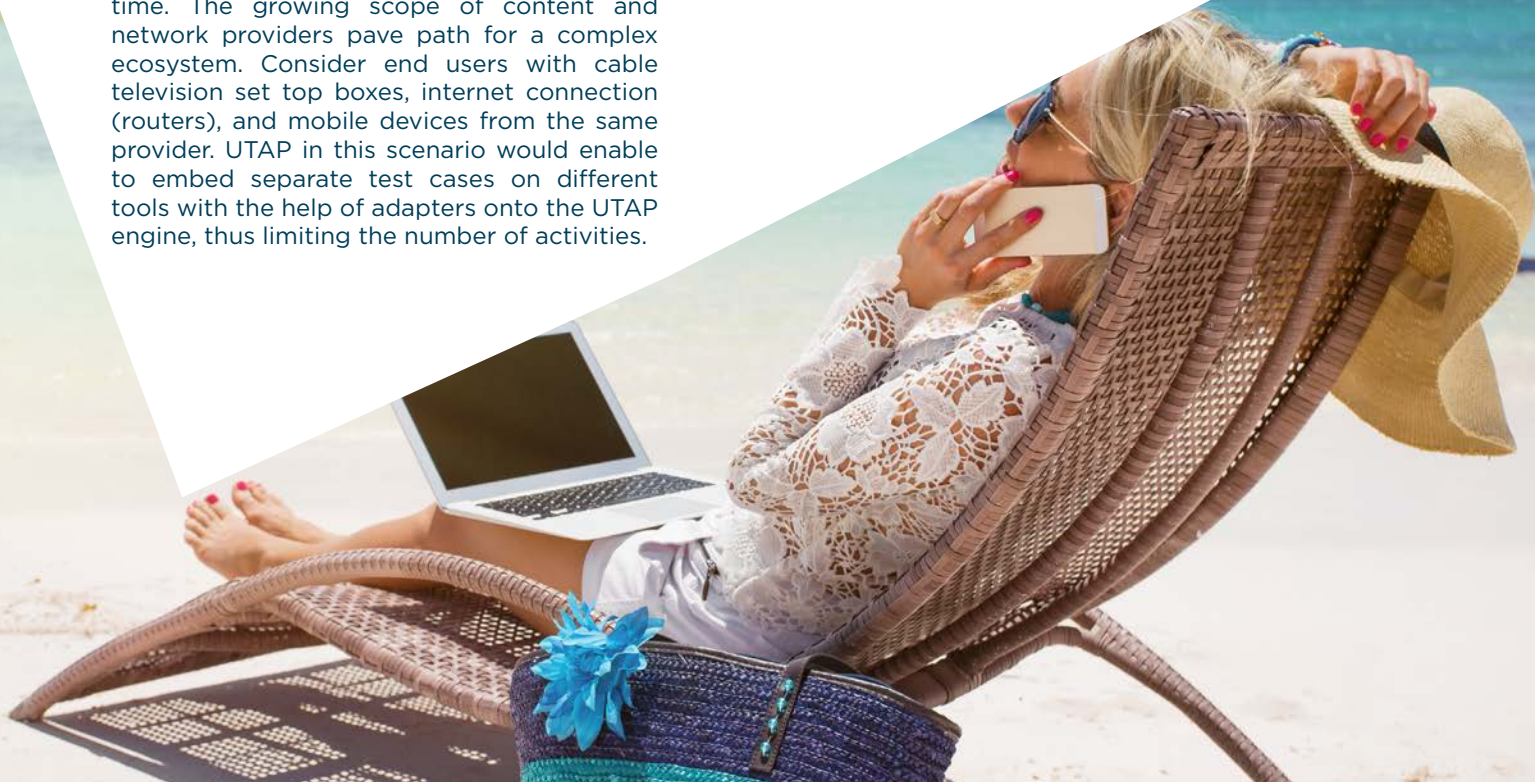
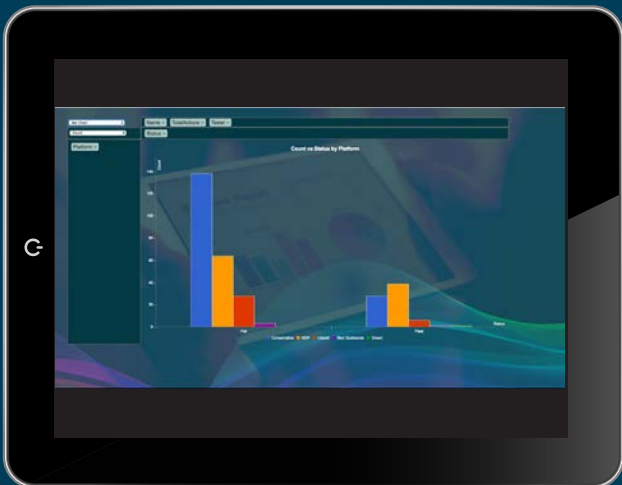# A SNEAK PEEK INTO THE UTAP USER INTERFACE

UTAP
HOME
PAGE
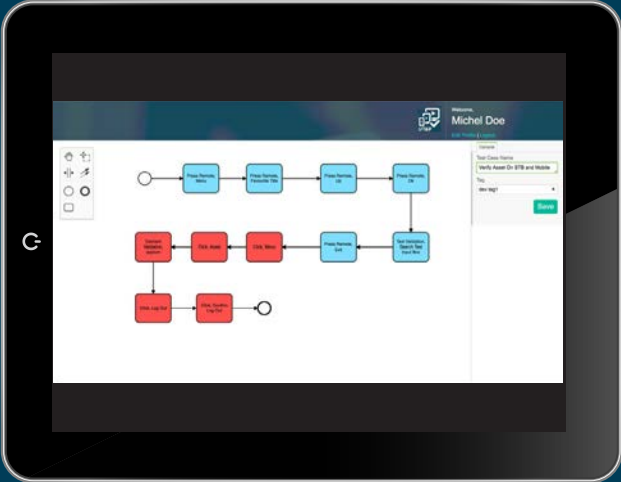
UTAP
CREATE
TEST CASE
PAGE
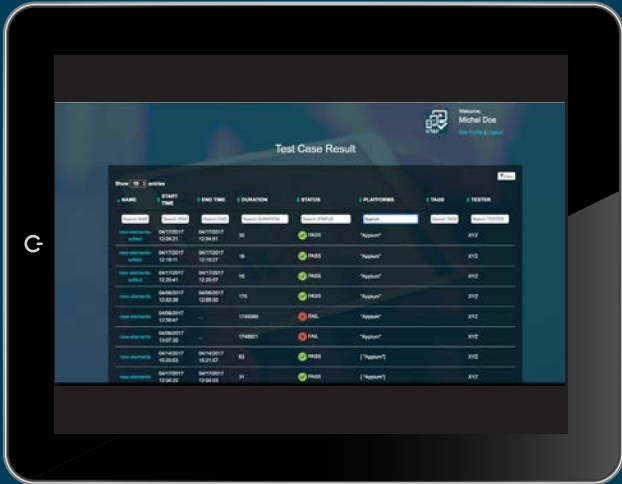
UTAP
TEST CASE
RESULT
SUMMARY

UTAP
DETAILED
REPORT

UTAP
REPORTS
PAGE

Get in touch with us for a day long workshop, where we showcase how our UTAP offering can automate your complex use case(s)

For more info,write to CS_Marketing@hcl.com

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Relationship™
BEYOND THE CONTRACT

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