

Spirent Umetrix® Data

Solution for Data Experience Evaluation (Datum)

Highlights:

- Objectively measure the user experience of data services with a unified approach across all major mobile OS platforms and PCs
- Capture device diagnostic data (Real-Time Test Metrics, or RTTM) such as RF signal and bearer to enrich voice, data and multi-service experience analysis
- Efficiently measure user experience, manage configuration and analyze test results across large numbers of devices
- Pre-test devices to accelerate Spirent Fit4Launch submissions and carrier acceptance
- Measure in the lab or the live network

Evaluate the User Experience of Data Services



Umetrix Data (Datum) evaluates user experience for **any major device and any data service** including Wi-Fi, LTE and 5G. As part of the Umetrix cloud platform, it enables management of application configuration, automatic upload of test results and reporting via a centralized, cloud-based web portal. Umetrix replaces DatumBase, providing enhanced reporting and project tracking in addition to all legacy DatumBase features.

Use Cases

1. Launch readiness assessment for new or upgraded data services.

Compare the experience of new 5G data services to previous releases or competitive services prior to launch. Set launch criteria and evaluate trial, soft launch and commercial networks to determine readiness.

2. Comparative analysis and ranking of data experience across device models.

Compare and rank any major device based on live network data experience criteria, such as web browsing and file transfer speed. Use the rankings to drive device marketing and acceptance.

3. Pre-testing for carrier device acceptance.

Umetrix Data enables device manufacturers to pre-test new device models prior to submission to carrier acceptance programs. By addressing issues proactively, acceptance can proceed without delay.

Key Metrics

(Application Layer)



File Transfer
Speed



Web Browsing
Speed

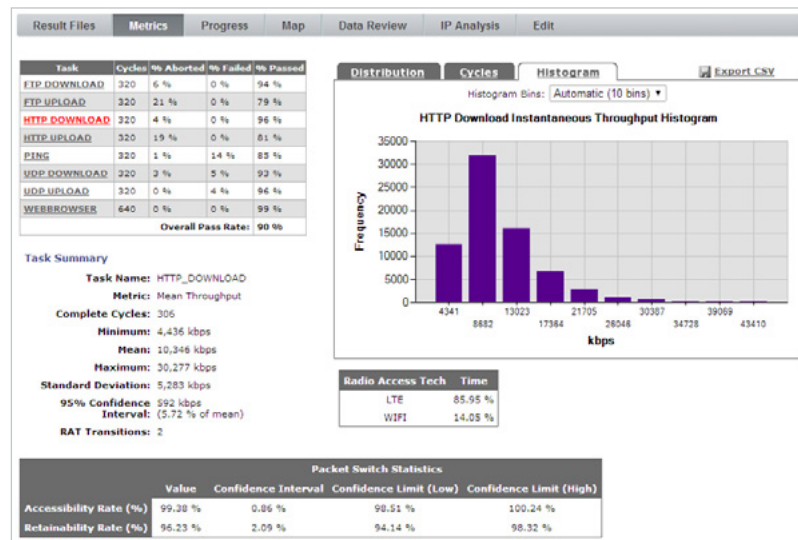
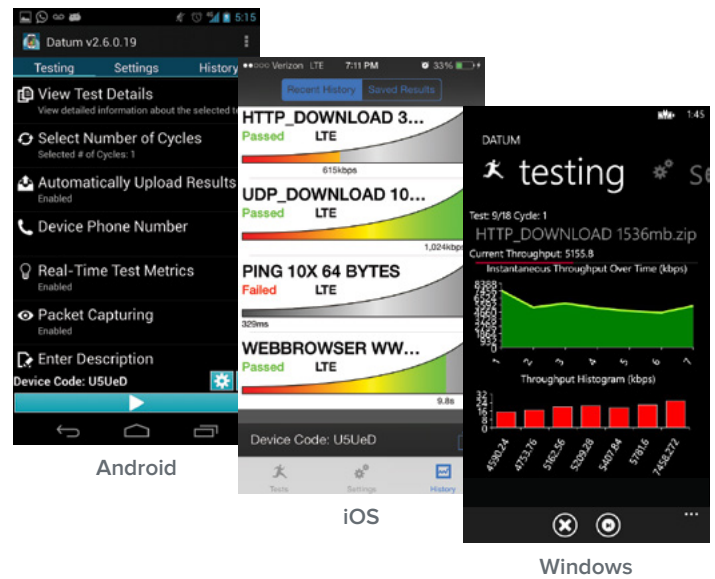


RF Bearer &
Signal Level

Features

Use a Consistent Test Approach on any Mobile Device

Umetrix Data measures user experience with an objective, consistent approach across any major mobile OS platform or Windows-compatible portable PC. That enables true apples-to-apples comparisons of user experience across devices, service providers and network technologies. Umetrix Data's consistent metrics help device, network and service teams work together to identify and solve user experience issues.



Manage the Measurement Process Centrally

Umetrix Data integrates with the Umetrix cloud-based web portal to provide a repository for all test cases, allowing them to be centrally managed. Furthermore, all test results are uploaded to the central repository, enabling seamless management of user experience measurement processes across teams or geographic locations.

Define Realistic Use Cases

Umetrix Data enables the definition of use cases (referred to as test sets) that mimic real-world user activities such as uploading a picture, downloading a file attachment, updating social network status, or browsing a website. Each test set consists of one or more of the following tasks: web browsing, file transfer, streaming data, multi-service (call and data), and latency test cases. Tasks can be combined in any order and are highly configurable to match specific user profiles or scenarios.

Edit Mobile Call MultiRAB Task

Name: set automatically

Test Method: 1

Protocol:

Data Server:

Target Throughput: kbps

Call Duration/Server:

Delay Before Call: seconds (0-60)

Delay After Call: seconds (0-60)

Delay After Data: seconds (0-300)

Wait Time After Task: seconds (15-60)

System Overview

Umetrix Data is comprised of several key components:

Umetrix Data Mobile App. The Umetrix Data Mobile App runs on iOS, Android or Windows devices. It operates in two modes:

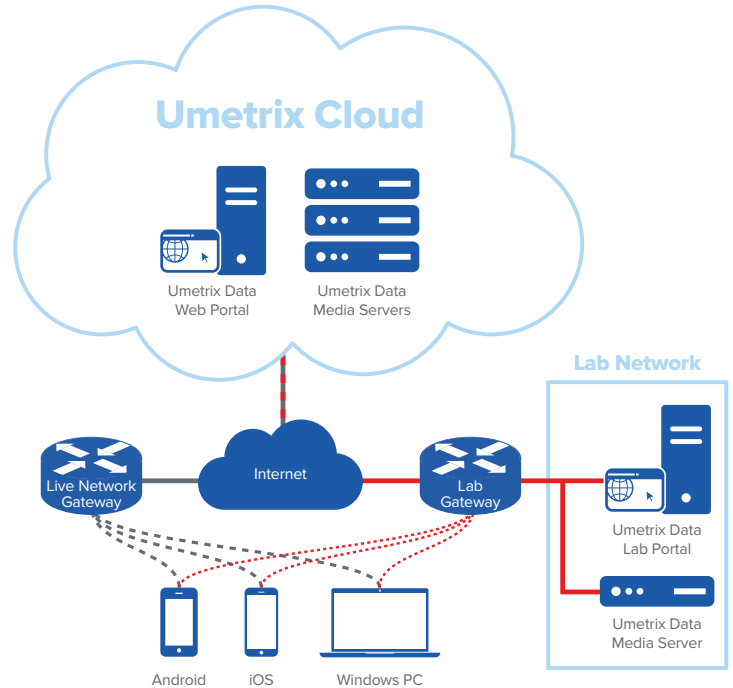
- 1. Data experience evaluation mode:** Umetrix Data receives agent configuration information from the Umetrix Portal, performs end-to-end data tests with the Umetrix Media Server, and uploads all test results to the Umetrix Portal.
- 2. Diagnostic data mode:** Umetrix Data collects RF status and other diagnostic data from the device while it performs voice, data or multi-service tests and uploads this data to the Umetrix Portal.

Umetrix Data is offered as a Win32 application (Datum PC) as well as a UWP application (Datum UWP/Datum Universal).

Umetrix Data Media Server. The Umetrix Data Media Server acts as an end-point for all data experience tests, hosting various types of media and services required to perform HTTP, FTP and UDP file transfers and ping tests. In addition, the Umetrix Data Media Server acts as a web server for reference web pages to enable web browsing speed tests.

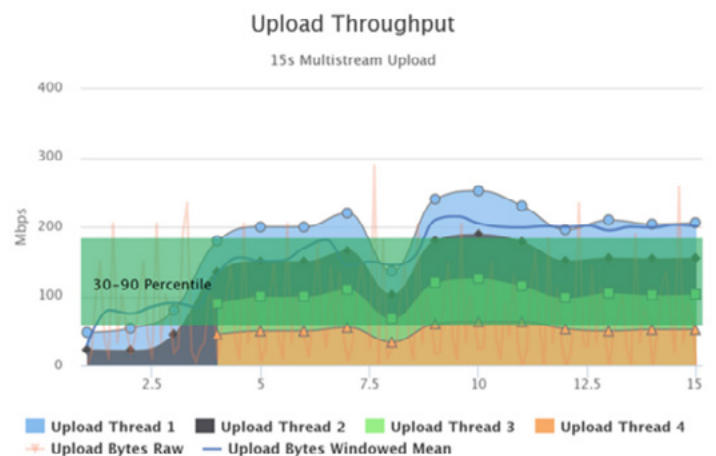
Umetrix Data Web Portal and Umetrix Data Lab Portal. These are web-based applications hosted in the Umetrix Cloud or in the Lab (or both), dependent on specific customer needs. The web interface accelerates evaluation of user experience for large and/or distributed teams. Project managers use the portals to specify the correct Umetrix Data configuration for a specific project. When field engineers begin testing, they first login to a portal using the Umetrix Data Agent and select the appropriate pre-defined Umetrix project. The Agent then downloads and applies configuration settings for all tests. As the engineer performs data experience tests or collects diagnostic data, all results/data are uploaded to the relevant project in the portal, allowing the project manager to monitor test status and validate results. Once all tests are completed and the data are validated, reports may be generated in a matter of minutes.

Umetrix Data may also be configured to coordinate multi-service voice and data tests, which establish data sessions and then initiate voice calls during the data transfer (requires Umetrix Portal and Umetrix Voice probe).



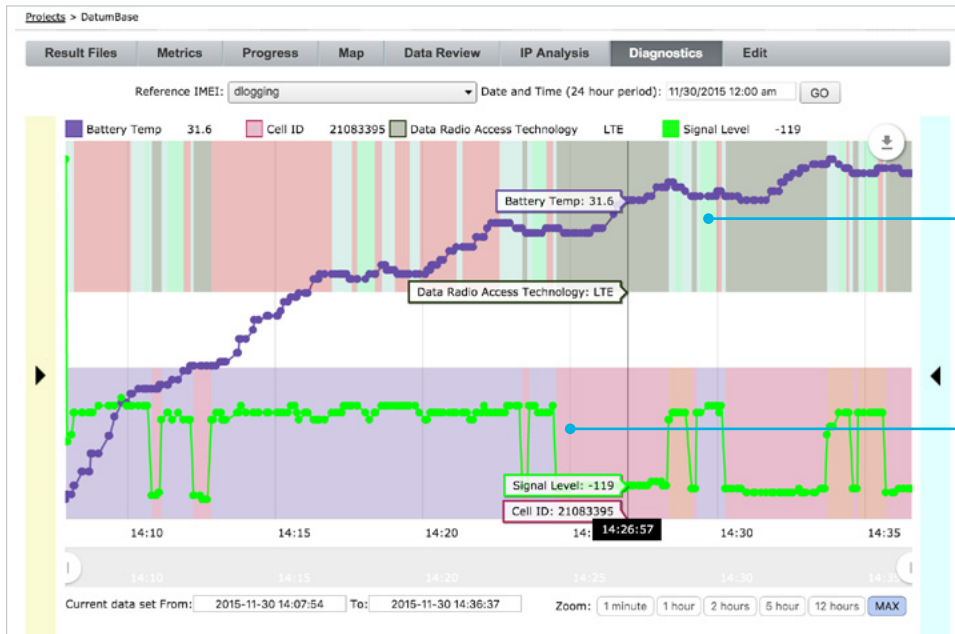
Use Case: Bandwidth Testing

- Quickly check the status of your internet connection
- Test maximum network bandwidth for both downlink and uplink to generate a bandwidth score
 - The download test uses two threads and is time-based
 - The upload test begins with two threads which scale dynamically up and down based on the instantaneous throughput. They are time-based and continuous individual uploads are performed



Example Analyses & Reporting

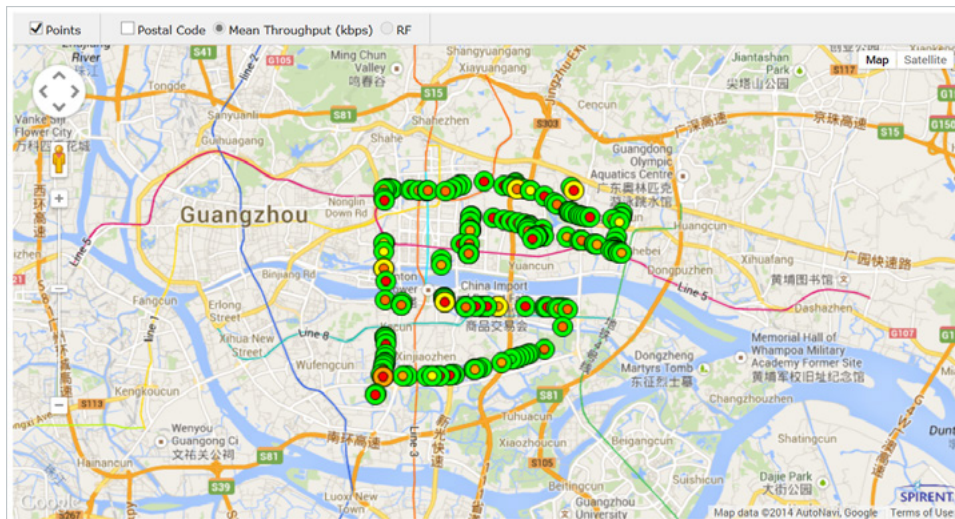
Diagnostics View



Quickly visualize transitions in radio-access technology

Identify relationships between signal strength and cellular information

Network and Application Layer Analysis Reports & Geographic Views



Automatically generate analyses of IP data for each individual test

Contact Us

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Americas 1-800-SPIRENT
+1-800-774-7368 | sales@spirent.com

US Government & Defense
info@spirentfederal.com | spirentfederal.com

Europe and the Middle East
+44 (0) 1293 767979 | emeainfo@spirent.com

Asia and the Pacific
+86-10-8518-2539 | salesasia@spirent.com