SamKnows

Whitebox - Mobile

For more information contact
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Overview

The SamKnows Mobile Whitebox is a specially designed inexpensive hardware probe which measures mobile broadband performance. The Mobile Whitebox is designed to be deployed in a dedicated fashion in a combination of fixed locations such as homes, offices and hot-spots, as well as moving locations such as taxis or trains.

The Mobile Whitebox can be deployed with one or more USB mobile broadband dongles attached. Unlike the fixed-line Whitebox, its Internet connectivity is not shared with the panelist hosting the device; the Mobile Whitebox's dongles are used purely for performance measurement. If multiple USB mobile broadband dongles are attached, tests will be performed over them sequentially – not concurrently.

The results of the tests are securely transmitted to hosted backend infrastructure for processing and presentation through a web interface in real-time.

Core Features

Remote Update

The Mobile Whitebox software suite has the ability to auto-update itself, downloading updated binaries and testing schedules.

Location-triggered Testing

The Mobile Whitebox is a GPS enabled device which allows it to accurately record the location of where a measurement took place. The GPS capability can be used trigger measurements at pre-defined locations so that when in moving vehicle, measurements are triggered at the same locations each time. When the GPS is not available, WiFi triangulation is used instead.

Measurement Capabilities

The Mobile Whitebox provides comprehensive measurement capabilities as listed below:

- Download and upload throughput
- Web browsing
- Video Streaming
- UDP latency
- UDP packet loss
- Availability
- Voice over IP
- DNS resolution and failures
- ICMP latency and packet loss
- FTP Throughput
- Peer-to-peer
- Email Relaying

Monitoring

The majority of the measurements are run against SamKnows's network of test nodes. These are dedicated servers either on-net (on the local ISP's network) or off-net (on the public Internet). Some measurements will also execute against real applications hosted on the Internet, mimicking their behaviour and measuring key performance variables.

The Mobile Whitebox can also passively monitor and record service status to provide a view of the availability of voice and data services. This includes ancillary information related to the service under test such as MNC, Bearer Type, LAC, Cell ID and more.

Specification

Mobile Whitebox	
Connectivity	1x 100Mbps Ethernet 1x internal 802.11n wireless interface 1x USB 2.0
Power	Micro-USB power Power draw: 1W
Physical Dimensions	Dimensions: 57mm x 57mm x 18mm Weight: 188g