

## Overview

To accurately measure broadband performance the SamKnows Whiteboxes need something to test against. For this reason, SamKnows maintains a global fleet of "test nodes". The test nodes are placed at major peering locations around the world.

The test nodes run special software designed specifically for measuring the network performance when communicating with the Whiteboxes.

The SamKnows Whiteboxes select the nearest node by running round-trip latency checks to all servers before measurement begins. This means that we are always testing against the server nearest to us in network terms, which will not necessarily always be the one nearest geographically.

SamKnows test nodes are positioned intelligently at peering locations that are not exclusive to any single ISP which means that they do not favour one ISP over another. The test nodes can also be placed within ISP networks in order to determine what degradation in performance occurs when traffic leaves the ISP.

### Test Node Management

The whole SamKnows test node fleet is fully managed and monitored to ensure platform integrity. This includes test node availability, capacity and overall health. System alerts are also in place to ensure the test node infrastructure is always available and operating well within expectable threshold bounds.

## Core Features

### Enterprise grade solution

SamKnows maintains a standard specification for all test servers to ensure that the server itself does not introduce inaccuracies into the results. All equipment is enterprise-grade and connectivity is over-provisioned to ensure no bottlenecks occur.

### Tier 1 data-centers and connectivity providers

SamKnows carefully selects each hosting provider on a market by market basis to ensure that the connectivity to the test nodes will not be impacted and that the availability will be optimal.

## Specification

### Test Node (Minimum Specification)

Processor	Dual core Xeon (2GHz+)
Memory	4GB RAM
Storage	80GB
Connectivity	Gigabit Ethernet connectivity, with gigabit upstream link
Form Factor	Rack
Rack Height	1U

