



**Broadband Forum Liaison To:**

IEEE 802.16 Working Group on Broadband Wireless Access Standards

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**Date:** March 8, 2013

**Subject:** Performance Measurements Architecture

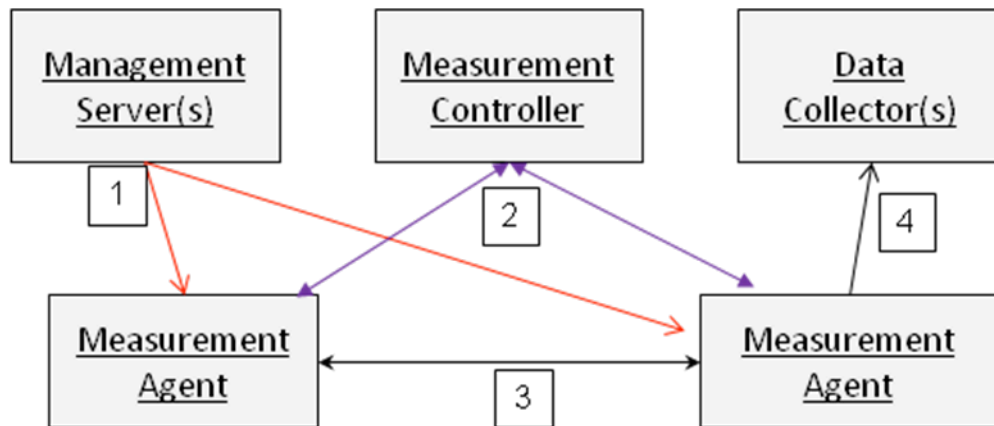
The Broadband Forum would like to share the current status and thinking of its efforts related to performance measurement. There are coordinated efforts underway in multiple Broadband Forum working groups under the umbrella project of WT-304 "Broadband Access Service Attributes and Performance Metrics".

Four high-level functions related to the operation and management of measurement functionality have been identified. These are: the Measurement Agent, Measurement Controller, Data Collector, and Management Server. The Measurement Controller may further be split into a Scheduling function and Test Admission function. These functions are defined as follows:

**Data Collector**

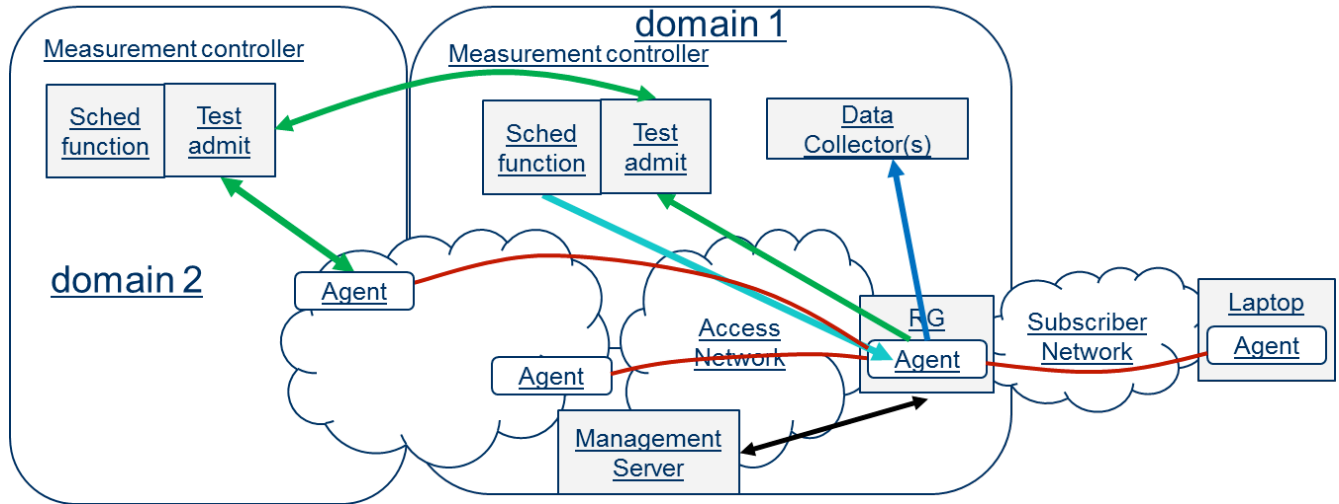
An operational function that collects measurement data from a Measurement Agent.

- Management Server** Manages and configures a physical device or network element. Examples include a TR-069 ACS (Auto-Configuration Server), or an EMS (Element Management System).
- Measurement Agent** An operational function that contains one or more Measurement functions.
- Measurement Controller** An operational function that controls running, scheduling, and general coordination of Measurement functions within a Measurement Agent.



1. The Management Server configures a Measurement Agent (MA) to communicate with a specific Measurement Controller (e.g., TR-069 server may configure parameters in a managed CE router's Measurement Agent).
2. The Measurement Controller configures the MAs with specific tests (e.g., the Measurement Controller may schedule periodic tests for the MA to run). Includes attributes such as target MA, type of test, and destination for results. If a particular test requires the MA to determine availability of the target MA, the Measurement Controller may include a Test Admission function to support this determination.
3. The MAs run the tests (e.g., runs a throughput or latency test).
4. MAs send results to the Data Collector(s) (e.g., the results are sent to the designated collection function). Both agents can send results.

Below is a diagram that shows an example of how these functions may be used to configure and coordinate single domain and cross domain testing.



Any questions or comments are welcome.

Sincerely,

Christophe Alter,  
Broadband Forum Technical Committee Chair

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**Date of Upcoming Broadband Forum Meetings**

DATES	LOCATION
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3 <sup>rd</sup> – 7 <sup>th</sup> June, 2013	Nanjing, China
16 <sup>th</sup> – 20 <sup>th</sup> September, 2013	Atlanta, Georgia, USA
18 <sup>th</sup> – 22 <sup>nd</sup> November, 2013	Rome, Italy

**Note:** A list of upcoming meetings can be found at <http://www.broadband-forum.org/meetings/upcomingmeetingsataglance.php>