Omni-Q for IPTV Providers

Monitoring IPTV Networks End to End

RADCOM's Omni-Q is a network-wide monitoring system as well as a workbench for troubleshooting and customer support for IPTV network operations. It offers a detailed, end-to-end view of the operations and component integration of IPTV network elements and services. Omni-Q provides vital statistics on IPTV network performance, availability and end-user overall experience.

The Omni-Q solution is designed to help service providers turn IPTV into a profitable, customer-proof technology that is easily manageable on both the subscriber and network levels.

Omni-Q for IPTV is based on RADCOM's award-winning Omni-Q solution, a well established, carrier-grade, Service Quality Management system, for carriers and service providers offering both wireline (Voice, Video, Data and Multimedia) and mobile (2.5G / 3G) services.

Omni-Q for IPTV is a distributed monitoring solution that collects subscriber and service information from various hardware probes within the network. The probes are installed in strategic locations throughout the network in a non-intrusive fashion and passively monitor the communication links connecting the various network elements.

Monitoring IPTV Service Availability, Delivery and Integrity

IPTV services are complex in nature. By monitoring the interaction between the user's STB and the middleware as well as transactions between the middleware and any other IPTV network elements, Omni-Q provides a complete picture of the performance of every component in the service delivery chain.

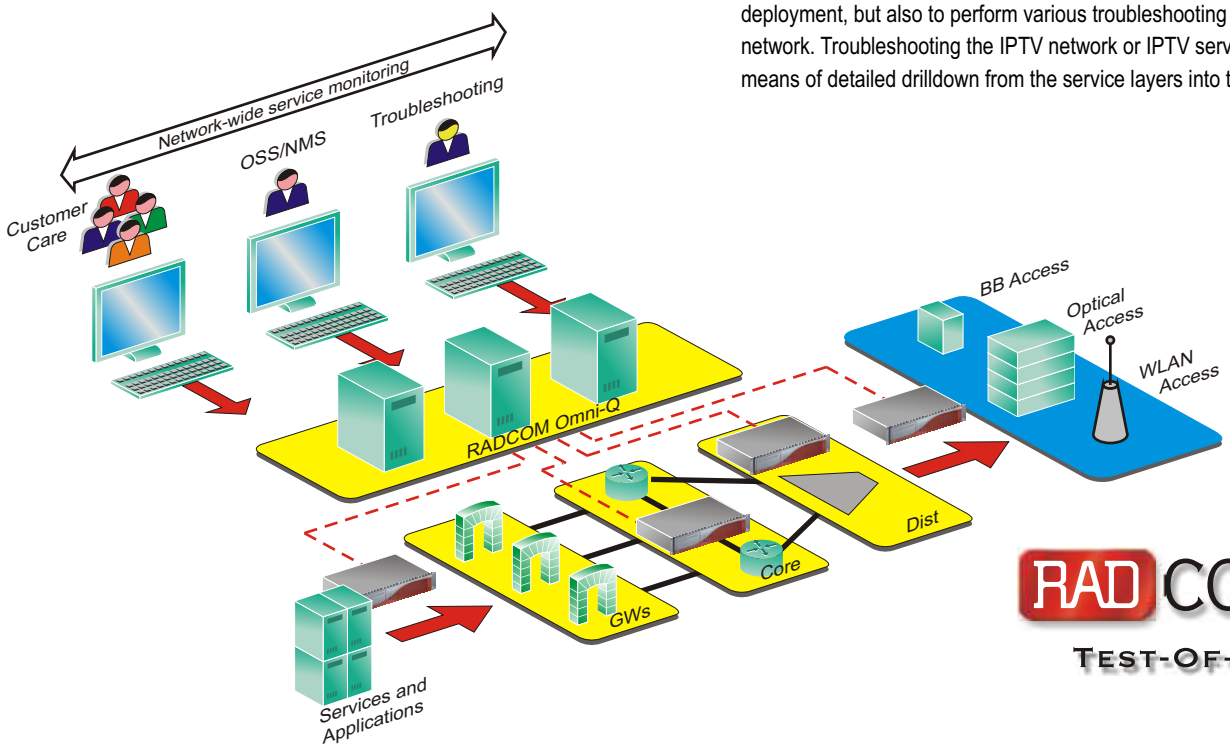
In order to provide a complete and correlated view of service delivery along with service integrity metrics, Omni-Q for IPTV probes monitor the following network elements:

- Aggregation routers and switches within the access network
- Middleware components
- DRM and CAC severs
- VOD server
- AAA servers
- Encryption elements

RADCOM's Omni-Q for IPTV collects service information by monitoring these network elements and their associated communication links. The information collected from these elements is correlated at the Omni-Q processing engine and sent to the Omni-Q presentation layer for display and analysis.

Troubleshooting IPTV Networks

Omni-Q allows service providers not only to monitor their IPTV network deployment, but also to perform various troubleshooting procedures on their network. Troubleshooting the IPTV network or IPTV services is done by means of detailed drilldown from the service layers into the network layers.



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Customer Care for IPTV Subscribers Made Easy

Omni-Q greatly simplifies handling the complaints of IPTV subscribers, allowing Customer Care personnel to easily see and track subscriber problems in real time and understand what the root cause of these problems is.

By using the detailed drilldown capabilities embedded in Omni-Q, high-level analysis as well as low-level troubleshooting is easily performed over the entire IPTV service architecture.

With simplified screens that provide an instant view into an individual subscriber activity, even untrained Customer Care representatives can locate problems at the subscriber level. When a subscriber calls with a service complaint, the Customer Care representative simply programs Omni-Q to filter for that subscriber's details. The representative can trace previous subscriber activities or, alternatively, look ahead for new subscriber activities. The representative can then troubleshoot these activities done by the subscriber or simply record all activity and send it for further analysis to a higher professional authority.

IPTV Monitoring and Customer Experience

Omni-Q monitors and calculates several types of IPTV service parameters extracted from the communication lines, such as:

- Network and media parameters
- DVB transport stream parameters
- Subscriber activity
- Application performance measurements
- Service usage and availability indicators

These Omni-Q measurements are provided on a per-subscriber basis, allowing Omni-Q to calculate and display the customer experience directly.

The Omni-Q system, along with the hardware probes, combines these parameters to present an overall picture of the service experienced by each customer in the following areas:

- Service availability
- Service performance (e.g. ZAP time)
- Video / audio quality
- Transport quality: Jitter, Delay and Packet Loss

IPTV Network and Media Measurements

The IPTV network and media measurements include KPIs focused on the following issues:

- Transmission network quality (i.e. Jitter, Delay, Packet Loss)
- Video stream quality (objective measurements)
- Video stream decode – presenting the various components of the video stream
- Video stream statistics
- Video stream performance and alarm information
- Tr101290 alarms and KPIs

Monitoring Video and Audio Quality

Omni-Q is powered by RADCOM's patent-pending GearSet™ technology. The GearSet is a three-chip packet and session processor that offers unmatched wirespeed monitoring performance. The GearSet allows the Omni-Q platform to monitor triple-play services at unprecedented processing rates, and yields the best scalability figures in the industry for Omni-Q's hardware probes. Each probe:

- automatically locates and monitors the quality of the video or audio stream;
- has hardware which is optimized purely for monitoring audio and video transport streams;
- can monitor thousands of streams simultaneously in a single box; and
- provides a MOS score for every stream monitored.

Monitoring IPTV Overall Service Experience

Omni-Q provides simple and intuitive summary information about the overall, correlated service experience view. This view allows the Service Provider to immediately trace subscriber requests that have not been answered properly, as well as understand the cause of such service failures. Omni-Q provides a detailed view of the signaling path, from the STB all the way into the middleware or the different IPTV network elements.

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