CHEETAH TECHNOLOGIES™

Reduce cost and increase performance with proactive maintenance

CheetahXD builds upon a framework that includes applications with functions such as Provisioning/ Configuration, Fault Management, Performance Management and System Administration/Diagnostics.

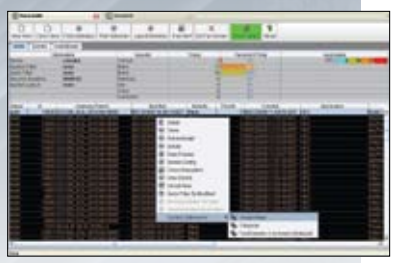
Cheetah XD™

HFC and IP Network Service Assurance Platform

Cheetah Technologies' next generation enterprise service assurance platform – CheetahXD is a cross domain network management and operational support platform that is based on proven industry standards, and offers a suite of applications for the status and performance monitoring of HFC, DOCSIS, IP and VoIP networks.

The built-in suite of applications help pro-actively monitor, manage, and test Hybrid Management Sub-layer (HMS), DOCSIS, and legacy devices in Broadband HFC distribution systems. CheetahXD applications offer an enhanced experience when used in conjunction with the multi layered Cheetah Technologies DOCSIS and standard HMS transponders. A full range of optional VoIP test suites and metrics are supported. CheetahXD also supports HMS based network elements from other vendors that span these HFC and DOCSIS domains. A northbound SNMP interface enables forwarding of all CheetahXD alarms into registered external systems.

Primary applications



Configuration & Provisioning

CheetahXD provides an auto discovery engine allowing operators to selectively auto discover particular types of devices. Custom alarm profiles for various devices types can be setup to be automatically downloaded to the devices upon discovery, dramatically reducing provisioning times through minimized user input.

Fault Management

The Notifier application in CheetahXD offers real time visibility into impairments that occur in the system and based on an operator's configured alarm criteria. The interactive and flexible application enables users to customize layouts, create dynamic filters, perform sorts and also launch third party applications based on the details of an alert. This enables operators to quickly integrate other systems such as trouble ticketing system into the CheetahXD framework. CheetahXD is also available with an Enterprise Fault Management System (EFS) that enables the system to be deployed at corporate or divisional centers to provide visibility into the alerts at regional systems.

Performance Management

CheetahXD provides a suite of performance management applications through its near real time Data Display, Scheduled Measurements and Reporting functions. These applications allow

operators to initiate on demand and scheduled data collection and displaying of crucial parameters and offer various formats to export and present the data collected. Both Data Display and the Scheduled capabilities of CheetahXD offer a unique mix of applications to proactively measure and provides the operator the opportunity to take corrective action prior to service affecting degradation.

Power Supply Testing

Battery Analyst, an automated background power supply testing application enables operators to define the time periods to selectively test the power supplies and batteries. The application dynamically performs standby testing on these supplies and presents the operator an analysis report based on the pass/fail criteria. Summary reports (available in PDF and CSV formats) reveal trends that enable targeted maintenance repairs and benefit operators by reducing maintenance costs for routine battery testing, as well as pinpoint potential problems before a commercial outage occurs.

IP Service Assurance

CheetahXD offers a collection of integrated HFC and IP test applications that allow operators to accurately pre qualify an HFC segment's readiness to provide Digital voice service. The VoIP test applications provide information on call setup and teardown as well as progress and statistics from the signaling plane. Near-end metrics from the calling client provide results for delay, loss, jitter and are summarized in a uniform mean opinion score (MOS). Bidirectional results are obtained where supported through RTCP-XR reporting.

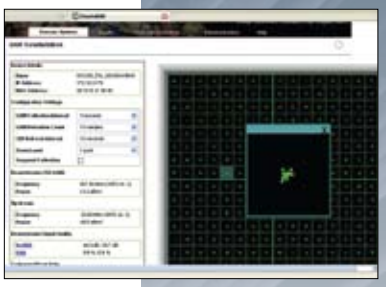
The test results obtained during service turn could be benchmarked and used for comparative purposes as the number of subscribers increase. Through accurate remote trouble isolation, operators can continue to reduce their maintenance and operational costs.

As part of its IP service assurance solution, the QAM constellation application available on all 3349-based DOCSIS transponders enables operators to quickly identify and diagnose symbol modulation performance issues in the RF plant. The IP sevice assurance application displays Upstream/Downstream frequency and power, RX MER, EVM and Rx Error Rate on Code words for Pre/Post FEC.

Motorola OmniStar® GX2 Optical Broadband Transmission Platform

This feature enables the user to utilize all existing CheetahXD applications (Tree Viewer, Notifier, Template Admin, etc) for the Motorola GX2 equipment as well as provide a generic ability to communicate with the devices via SNMP, including reading from and writing data to the devices when possible. Custom Auto-Discovery and Trap Filters utilize basic device modeling and alarming capabilities to provide monitoring and control of the GX2 modules. Supported modules include:

Module Name	Model Name
Control Module for GX2 Chassis	GX2-CM100B-R
Power Supply for GX2	GX2-PSAC10*, GX2-PSDC10*
1310 nm Optical Transmitter	GX2-LM1000B
1310 nm Optical Transmitter	GX2-LM1000E
Dual Optical Receiver	GX2-RX200BX2
Quad Optical Receiver	GX2-RX200BX4
1310 nm Optical Transmitter	GX2-LC1000E



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