



# Star Management Suite

## Network Management Solution for 4G Networks

**The Star Management Suite is a comprehensive carrier-grade network management solution for enabling rapid network deployment and seamless, cost-effective operation of 4G services.**

Expedite the installation and provisioning of services, proactively monitor your network and be alerted to performance issues before they escalate. Scalable to your networking needs, the Star Management Suite lets you easily manage your complete range of networking tasks, from configuring and controlling 4D devices to network mapping and integration with Network Operations Center (NOC) management systems.

### Benefits

- Provides visibility into network performance
- Ensures Quality of Service (QoS) for video, data and voice
- Accelerates response time to network events
- Simplifies lifecycle management of 4G devices

### The Star Suite includes:

<b>AlvariStar</b>	Safely and efficiently manage the deployment and operation of your entire 4G network.
<b>AlvariCraft</b>	Laptop-based application for configuring, monitoring, and upgrading individual base stations.
<b>StarACS</b>	Automatic configuration server lets you cost-effectively manage multi-vendor CPEs, including fixed and nomadic devices.
<b>StarQuality</b>	Designed to optimize network usage, maximize traffic capacity, and deliver high-quality service.
<b>StarReport</b>	Powerful business objects-based tool providing network configuration and performance visibility for improved decision support

# AlvariSTAR

## Carrier-Class 4G Network Management System

AlvariStar is a carrier-class NMS for 4G networks.

AlvariStar enables operators and service providers to effectively manage 4G networks while maximizing resource usage and minimizing operational expenses.

A key component in the Star Management Suite, AlvariStar is a reliable and cost-effective platform that provides a full range of network surveillance, maintenance, configuration and fault handling capabilities

### Benefits

- Control costs with gradual pay-as-you-grow configurations to fit to any size network
- Enable reduced OPEX and Total Cost of Ownership (TCO)
- Reduce costly repair personnel dispatch
- Simplify network maintenance
- Shorten time-to-market for new service introduction
- Smoothly integrate with OSS layers
- Increase subscriber loyalty and satisfaction

### Field-Proven

A field-proven management platform, AlvariStar enables oversight of large-scale access networks and supports expansion using distributed and scalable server architecture. Delivering maximum flexibility without compromising on stability, AlvariStar keeps broadband network expansion costs under close control.

### Comprehensive FCAPS to Maximize Performance

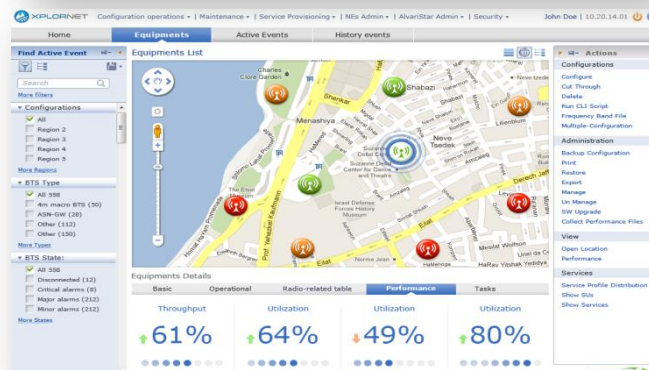
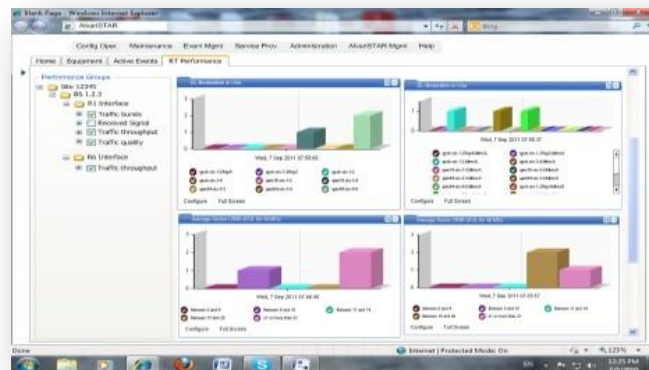
AlvariStar provides comprehensive FCAPS management functionality including fault, configuration, , administration, real time performance and security—all accessed via an easy-to-use GUI. Designed to address the needs of network technicians, regional and national Network Operations Centers (NOCs), AlvariStar enables fully functional network surveillance, monitoring and configuration.

### Northbound Interfaces and Web Services

AlvariStar offers standard-based northbound interfaces (NBI) for higher level OSS and BSS connectivity—delivered via an abstraction layer to ensure smooth and quick integration. AlvariStar also supports Web Services (XML/SOAP) and SNMP northbound interfaces.

### Batch and Bulk Operations

Particularly suited for bulk operations and pre-provisioning on large-scale deployments, AlvariStar supports batch configuration and maintenance tasks across multiple network elements.



# StarACS

## Carrier-class 4G CPE Management System

StarACS ensures safe and automatic configuration of a variety of TR-069-based CPEs and end user devices.

StarACS supports the entire end user device service life cycle, including provisioning and mass software upgrades. Based on an intuitive web GUI, StarACS enables new subscriber acquisition and service provisioning at reduced cost.

### Benefits

- Benefit from low introduction costs and pay-as-you-grow configurations to fit to any size network
- Manage the entire CPE service life cycle
- Comply with market standards
- Easily manage a variety of CPEs
- Shorten time-to-market for introducing new CPEs and services
- Reduce ongoing support costs, OPEX and TCO (Total Cost of Ownership)
- Reduce costly dispatch of repair personnel
- Smoothly integrate with OSS/BSS layers
- Increase subscriber satisfaction and loyalty

### Remote CPE Management for Maximum Efficiency

StarACS enables operators to remotely manage, monitor, and diagnose data, voice, and video services on TR-069 CPEs providing benefits in terms of management efficiency and economies of scale. System problems are quickly identified and resolved and updates are carried out seamlessly, virtually eliminating unnecessary truck roll costs.

### Task Manager for Batch and Bulk Handling

The StarACS task manager enables operators to perform batch operations on multiple CPEs. StarACS's simultaneous configuration task allocation saves time and significantly reduces management costs.

### Automatic Zero-Touch Provisioning

StarACS automatically provisions and remotely sets up devices to support value-added services when subscribers register for new services. The CPE automatically registers first-time connections on the StarACS server, receiving updated firmware, general and individual settings which translates to shorter time-to-market and reduced costs.

### Northbound Interface

StarACS offers standards-based northbound interfaces for smooth connectivity with higher-level management systems, such as OSS and CRM. This provides an abstraction level for service providers, eliminating the need to customize support for each CPE and significantly shortening OSS Integration processes.

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Update a CPE

Manufacturer: All Model name: All

Manufacturer	Model name	Serial	Created	Updated	Status
Alvarion	BMK	12345678	4/10/2011 9:58:37 AM	4/17/2013 2:30:51 PM	0
Alvarion	CP1200	7298390	4/10/2011 10:05:04 AM	4/17/2013 2:29:58 PM	0
Alvarion	CP1500	7538711	4/10/2011 11:39:14 AM	4/17/2013 2:28:32 PM	0
Genetek	CP6000	GH8000000596	5/28/2012 2:18:40 PM	4/17/2013 2:27:57 PM	0
Genetek	CP6000	GH8000000568	5/28/2012 2:19:11 PM	4/17/2013 2:27:56 PM	0
Genetek	CP6000	GH8000000136	2/2/2012 5:35:25 PM	4/17/2013 2:27:55 PM	0
Genetek	CP6000	GH8000000189	2/2/2012 4:58:51 PM	4/17/2013 2:26:47 PM	0
Genetek	W8M4 CPE	GH800000015	4/7/2011 5:09:58 PM	4/17/2013 2:23:43 PM	0
Genetek	W8M4 CPE	GH800000879	11/27/2011 2:14:42 PM	4/17/2013 2:22:18 PM	0
Genetek	CP6000	GH8000000127	2/2/2012 4:58:40 PM	4/17/2013 2:22:06 PM	0
Genetek	CP6000	GH8000000013	11/16/2011 11:00:20 AM	4/17/2013 2:21:16 PM	0

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Update a CPE

Device Info

Manufacturer: Genetek  
Product Class: CP6000  
Info Model Name: W1XB-100  
Description: Genetek3350  
Serial Number: GH8000000452  
Hardware Version: V03  
Firmware Version: 01.00.00.013 (04/13/2012 shcRed)  
Uptime (seconds): 1425499  
Registration Date: 5/28/2012 2:17:59 PM  
Last Connection: 4/18/2013 12:03:51 PM  
MAC Address: 20:10:7A:3C:AB:E1  
Connection Request URL: http://192.168.91.156:50003/creq  
Remote URL: http://192.168.91.156  
List of methods: List

Refresh Status

Rollback Factory Reset Delete Reprovision Start Trace Ping

# StarQuality

## Carrier-class 4G Quality Management System

StarQuality is a carrier-class performance and traffic monitoring system that ensures Quality of Service (QoS) and optimizes 4G network performance by identifying network problems and bottlenecks, maximizing traffic capacity and optimizing resource allocation.

### Benefits

- Optimize 4G networks
- Maximize traffic capacity
- Ensure Quality-of-Service (QoS) and service levels
- Proactively identify problems and bottlenecks
- Detect performance degradation
- Enable reduced ongoing support costs, OPEX and Total Cost of Ownership (TCO)
- Increase subscriber loyalty and satisfaction

### Detect Problems with Threshold Crossing Alerts (TCAs)

The StarQuality enhanced TCA mechanism detects abnormal traffic patterns and load conditions, and anticipates performance degradation. When specified thresholds are crossed, a TCA alarm is generated.

### Intuitive Web-based Client and User Interface

StarQuality boasts an intuitive web-based GUI enabling easy navigation and drill-down with an intuitive 4G logical hierarchy consisting of base stations, sectors and subscriber devices.

StarQuality presents data in user-friendly graphs, allowing operators to go backward and forward in time, and request data for user-defined periods. Data can be exported to popular file formats for further analysis.

### Northbound Interfaces

StarQuality offers standard-based northbound interfaces (NBI) for connectivity to higher-level management systems, such as OSS and Network Management System (NMS) platforms. StarQuality NBI includes web services (XML/SOAP), SNMP for alarm forwarding, bulk data export to Excel and direct database access for data mining operations.

### Flexible Report Generation

StarQuality features versatile report generation capabilities for detecting potential network problems and resolving them before the network is adversely affected. These capabilities include comparison, trend analysis and other user-defined reports, configured and generated from an intuitive web-based GUI. Built-in Top N reports enable easy identification of the most heavily loaded and problematic sectors, as well as daily, weekly, or monthly report view.



# StarReport

## Flexible Reporting for Improved Decision-Making Support

With the increasing complexity of WiMAX™ networks, managers need reliable information on network status in order to optimize performance, increase customer satisfaction and reduce OPEX. StarReport empowers network managers, providing them with actionable insights enabling improved network management.

### Benefits

- Flexible ad-hoc query, reporting and analysis tool
- Predefined report package
- Integrated with AlvariStar, StarQuality and StarACS
- Network-level configuration, inventory and performance reports
- Integrated view of access network, traffic and device information

### Deploying and Managing a Complex Environment

With the rising complexity of 4G networks and rising subscriber demands, visibility to the network is critical. Lack of visibility and in-depth analysis of network status, configuration and performance can have costly bottom-line implications. StarReport provides a quick and efficient way to generate network wide inventory, configuration, performance and cross functional reports by integrating with AlvariStar, StarACS and StarQuality. This holistic view of the network enables configuration consistency across the network, central management of software versions and more.

### Optimizing Resource Utilization

Predefined and ad-hoc reports help analyze network behavior, monitor trends, and identify problems or bottlenecks. These insights from a highly reliable source help anticipate problems before they happen, allowing preventive measures and enabling reduced OPEX. The ability to intelligently plan capacity and optimize performance enables tighter control on spending and reduced CAPEX.

### Increasing Customer Satisfaction

A well run network is completely invisible to the subscriber. Subscribers expect to receive their services whenever and wherever they need them. Visibility into the network helps network managers promote programs and plans that transparently improve customer experience and enhance customer satisfaction

