ECO Monitor

Overseeing subscriber service availability and quality

FEATURES

- Address high impact problems
- Improve profitability by reducing operational costs
- Identify service issues proactively
- Avoid QoE issues
- Avoid data acquisition issues

PRODUCT OVERVIEW

ECO Monitor simplifies the process of troubleshooting network issues by tracking trends in service health both historically and in real time. ECO Monitor shows service data over time for all subscribers, and operations personnel can filter this data by service (such as by VoIP or HSIA) and by location (such as by state or postal code). Users can analyze the data to find correlations between groups of subscribers with similar issues.

Address high impact problems

Traditional network monitoring does not always detect infrastructure outages. Many of the longest outages are caused by problems not encountered previously. To see new problems, the best strategy is to have a view into the quality of service at the point of consumption, in the subscriber's home. To understand the quality of service in the home, data must be gathered from the subscriber's devices.

Troubleshoot more effectively

Geographic correlation

The service network map enables users to determine where a problem is occurring, in real time. Colored shapes on the map show the postal codes where devices are located. The color of these shapes indicates visually where service is working as expected and where there may be service issues. Problem areas are highlighted in red for alerts, which are triggered when a problem threshold is reached.

Time correlation

The time series graphs enable users to determine whether a service issue has affected devices all at once or in a sequence. A time series graph shows the data gathered for a particular KPI both historically and in real time.

Attribute correlation

The heat map enables users to determine whether affected devices share static attributes, such as model or firmware, or statistical attributes, such as bandwidth usage or dropped packets.

Tracking possible issue triggers

While troubleshooting an issue, a user can track possible issue triggers over time using an item in a watch list that evaluates a KPI over time for a specific location. This data is shown in a time series that users can monitor to determine whether the possible trigger is the actual trigger.

High impact problems affect service availability frequently and include:

- Systemic problems that affect the entire network. It is easy to find these because most subscribers are affected.
- Problems that affect devices with the same attributes. It may be more difficult to find issues with devices that share an attribute, such as firmware version or model number.

Improve profitability by reducing operational costs

With the traditional troubleshooting process, it is difficult to determine the location of the fault. This means average handle time (AHT) is increased and repeated truck rolls are required. Time used per trouble ticket both in-home and in the field is too long. Using ECO Monitor moves issues down the cost chain. ECO Monitor provides tools that enable operations personnel to determine the geographic location of the problem and which devices are affected. This means more focused troubleshooting and quicker resolution.

Identify service issues proactively

With the traditional troubleshooting process, faults are handled with a reactive approach; incidents have occurred and subscribers have complained before fault rectification starts.

ECO Monitor relies on key performance indicators (KPIs) that combine diagnostic results that help determine the health of a service with alerts that determine thresholds for those results. KPIs monitor the performance of a service, using diagnostics that determine the health of a service by evaluating statistics in the device data model. Key to the process of proactive service assurance is the frequent collection of device data from the entire device population.

ECO Monitor is built on ECO Collect, which gathers large amounts of data without affecting service to the subscribers. KPI data is collected and processed by ECO Collect. ECO Collect gathers data from devices and then transforms and normalizes the data so that it can be evaluated consistently, regardless of its source. See the ECO Collect data sheet for more details about the acquisition of large amounts of subscriber information.

Avoid QoE issues

During Quality of Experience (QoE) analysis, users can encounter problems gathering enough data, correlating that data with more than four attributes, and visualizing that data.

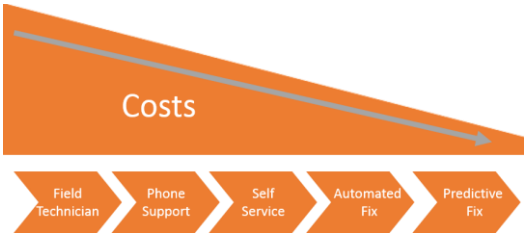
Avoid data acquisition issues

It is difficult to gather large amounts of device data at a high frequency without affecting the provisioning of service through the auto configuration server (ACS). Any data gathering solution must have the ability to give priority to the provisioning and management of devices over the collection of statistical information. In addition, processing large amounts of data should not require the ACS infrastructure to grow too large, as this can be costly. During the data acquisition process, users can encounter several setbacks.

It is important not to overload the ACS provisioning and management capabilities by adding large amounts of CPE diagnostic information; however, the more device information collected, the easier and quicker problems can be solved. ECO Monitor solves this problem through the ECO Collect infrastructure, which relieves the ACS from the burden of collecting device diagnostic data.

In typical big data deployments, large amounts of data is gathered and queued for analysis at a later time. Analyzing large data sets either takes a very expensive infrastructure or a very long time to process.

ECO Monitor solves this problem by analyzing the data at the time of data acquisition. By having the raw data and the results stored, real-time analysis can be conducted where typical big data solutions would take days or weeks to provide analysis.



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- United States: 866-36-ARRIS
- International: +1-678-473-5656