

01 Overview

Guavus Alarm IQ uses advanced analytics and AI to understand and predict which alarms are truly important and will actually impact customer experience.

Guavus Alarm IQ equips NOC teams to be more effective by: REDUCING ALARM VOLUME, PRIORITIZE ALARMS based on those most likely to lead to a network incident, and ESTABLISHING CORRELATIONS between alarms to identify which alarms typically proceed others, thereby automatically isolating true root issues.

02 Key features

- Prioritization of alarms
- Root issue detection and consolidation of alarms
- AI-Based incident prediction
- Adaptable Machine Learning models that change to alarm patterns
- Bayesian network analysis
- Integration to 3rd party software via push and pull APIs

03 Technical details

Solutions supported:

- IBM Netcool Tivoli Fault Management
- BMC Remedy Trouble ticketing
- Other Alarm Management tools on the radar include HP TeMIP (Telecommunication Management Information Platform).

Volume supported:

- Alarm IQ can be scaled to ingest more data by adding more nodes
- Typical volume for a medium sized operator - 30-50M alarm events per month

Network Topology needs:

- NONE. Alarm IQ does not rely on network topology in order to predict incidents. Instead, alarm IQ reads the streams of alarms from the network and uses attribute like the node information, the time-series (harmonics) and frequency (periodicity) of the alarms, etc. to determine the relationships between alarms and incidents.

04 Users

NOC Managers and Operations Directors:

- senior, adverse to change, backlogged
- Need to downsize/outsource the tier 1 network operation
- constraint by limited budget and high turnover

05 Business pain points

Alarm triage is inefficient

- Too many alarms to dismiss; up to 60% incidents are missed
 - 500+ incidents per day in a Tier 1 Carrier
 - \$50-\$500 lost per missed incident
- only 2-3% of alarms addressed require investigation

Revenue losses due to SLA violations

Disloyal customers

- Over half of customers never report poor service
- 3x more likely to leave
- Repeated issues increase churn

06 Competition

	Netcool	Moogsoft	BigPanda	Alarm IQ
Target Market	Ent./Data Ctr/CSP	Enterprise/Data Ctr	Enterprise/Data Ctr	CSP
Alarm Noise Reduction	Rules-Based	Algorithmic	Algorithmic (+Rules?)	Algorithmic; Future: Sub-Aware Algorithmic
Auto Ticketing/Dismiss	✓✓	✓?	✓✓	✓✓
Correlate/Prioritize Alarms	✓✗	✓✓	✓?	✓✓ Future: impacted subs
Likely Root Cause/Fix / Deploy Fix	✗✗✗	✓✓✓ Humans label data w/in tool	✓?✗ Manual	Future: Uses resolution codes
UI/Workflow	Widely Integrated	Forced war-room model	Alert-driven	Alert-oriented; Augments existing tools/workflows
Integrations/Deployment	Not investigated	50+/4 to 6 weeks; requires "algorithm calibration"	37+ / SaaS; "works out of the box"	2 std integrations / Involved deployment
Core Technologies	Proprietary	MySQL !! / Elasticsearch	SaaS (Unclear)	HDFS/Impala/Hbase/etc.
Scalability	Good	Single Function Servers !!	SaaS	Horizontal/SaaS (future)
Open Flexible Platform / Multiple Data Domains	✗✗	✗✗	✗✗	✓✓
List Price	Not investigated	\$8/MD/month	\$6/MD/month	\$4.60 to \$7.87/MD/mo

08 BENEFITS

\$25M+ yearly savings expected in tier 1 carriers, through:

- 90% reduction in alarms (> 3% lead to incidents)
- Seamless deployment without changing existing system
- 84%+ reduction in Mean Time to Understand (MTTU) issues
- Associating alarms connected to known incidents and maintenances and dismiss them automatically
- No more programming and maintenance of static rules

09 Success story

Alarm IQ accurately detected and filtered up to 99.5% of incoming alarms, bringing a North American MSO (Multiple System Operator) a projected \$17M+ in annual savings.

"I compared your predicted results with the actual data. An average of %91.2 of predicted incidents were accurate, and your model can foresee %71.2 of maintenance tickets.

10 FAQs

How much time is required to train the Alarm IQ data model?
 - 1 month of data is sufficient to train the Alarm IQ data model. This can be done using historical data if required.

How much hardware is required to run Alarm IQ? VMs (Virtual Machines)?
 - AIQ supports both physical and virtual infrastructure as per the customer's requirements;
 - Distributed, highly available, fully redundant, scalable architecture;
 - Number of nodes required based on the volume of data that needs to be processed.

11 Resources

Pricing model: tiered perpetual license
 - more at: <https://bit.ly/2t4NMek>