

Smart Software Algorithms Let IT Breathe More Easily

Patented CloudIQ algorithms apply human and machine intelligence to help IT teams move faster and be more successful.

Part 1 in a series of blogs.

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All businesses are challenged by their IT Infrastructure landscapes, which are extraordinarily complex and heterogeneous. Managing a growing number of data centers and edge systems can be a nightmare. It's not easy to detect unhealthy systems among dozens to hundreds and even thousands of systems in a timely manner. Troubleshooting to identify the source of problems and then finding the right advice to fix them is even more difficult. As a result, ITOps, DevOps and the business all suffer.

There is a technical solution: AIOps software.

Using telemetry data and patented machine learning algorithms, our CloudIQ AIOps software proactively monitors infrastructure health issues, identifies probable causes, provides help articles and recommendations for remediation, and has APIs for triggering automated actions.

There are three main reasons why IT teams use CloudIQ to monitor and analyze their Infrastructure.

1. It proactively monitors system health and provides recommendations, so you can reduce risk
2. It makes predictions, so you can plan ahead
3. It saves you time, so you can be more productive

This blog will focus on number one, and you can read my blogs about the other two on www.dell.com/cloudiq.



Technical Solution: Proactive Health Monitoring and Recommendations

CloudIQ provides a proactive health score for all Dell infrastructure systems in one consolidated view. The view can be filtered according to type of system (e.g., server, storage array, etc.) and sorted by health score value, business unit, location, among others, to help you prioritize actions.

The health score view for each system is based on the issues impacting the score, including component, configuration, capacity, performance and data protection issues. Each issue has an intelligently weighted impact value that is specific to the system type and model. It also provides a view of health changes over time as well as active issues, their description, and recommendations for resolution.

Three main factors that distinguish CloudIQ health monitoring are:

1. Telemetry data from frequent time intervals are continuously monitored to calculate health score using a health score engine driven by patented algorithms. In addition, the health score engine monitors the predictive output of some of the analytical capabilities to trigger a new health score and health notification.
2. It archives historical health score changes for up to 24 months so you can identify recurring problems. For each health change event, it displays a description of the issue and a recommendation for resolution.
3. Health scores are available in a consolidated user interface and common format for the entire on-premises infrastructure stack (data storage, networking, server, data protection and hyperconverged systems), on-premises infrastructure as-a-service (e.g., data storage) and a growing number of services in public clouds (e.g., data protection).

Health score categories include Poor, Fair and Good ratings. All score impacts are not equal, and the health score engine recognizes that by only subtracting the most severe issue from a total score of 100. Otherwise, a system with many minor issues subtracted from 100 might appear severely crippled, when in fact it's not.

With these intelligent scores, you can weigh the relative severity of issues and confidently prioritize your actions. As soon you resolve the top-most impacting issue for a system, its score will change to reflect the impact of the remaining top-most issue, and so on.

CloudIQ Users Speak Out

Based on worldwide user surveys, CloudIQ makes a big difference for IT Operations. Here are some typical comments¹ from survey respondents.



“With CloudIQ, I am sure that we’re running the latest available updates to our systems, apply best practices and have more available time to plan for any downtime or fix. Its recommendations and analytics speed time to resolution by 5X.” – *System Administrator, Financial Services Company*

“With CloudIQ, we’ve improved our productivity so we can work on new initiatives, better maintain current environments and do additional training. We can catch storage issues faster, address problems quicker and tell if the issue is resolved. CloudIQ’s proactive notification on storage health issues has had the biggest impact on our business.” – *Storage Administrator, Manufacturing Company*.

IT Ops Can Breathe Easy

To breathe easy at our jobs, we all need faster time to see results and more time to achieve bigger business outcomes. AIOps can be a game-changer for your whole business. Surveys show that CloudIQ enables IT teams to resolve infrastructure issues 2X to 10X faster¹ and saves them an average of one workday per week.¹

As Scott Sinclair, Senior Analyst at Enterprise Systems Group, explains, “Modern IT Operations has a new mission... it’s about the data and the speed of IT.” To hear Scott Sinclair discuss the imperative for AIOps, see his [short video](#).

To learn more, see my related blogs, CloudIQ demo videos and Scott Sinclair’s AIOps white paper on www.dell.com/cloudiq.

About the Author: Deepak Nagarajegowda

Deepak Nagarajegowda is an accomplished engineering leader with a history of developing and deploying innovative IT solutions in Supply Chain, Data Center, Data Science, Analytics and Data Engineering domains. As Senior Principal Data Scientist for the Infrastructure Solutions Group at Dell Technologies, Deepak is playing a leading role in developing CloudIQ AIOps for the company’s infrastructure product portfolio. Deepak holds eleven US-granted patents in AI/ML, Cyber Security and Data Storage, with more than 26 patents pending. Before Dell, Deepak worked for Verizon, Cisco, Intel and Sony in Supply Chain, SAP, Big data, Cloud computing, Distributed Computing, and AI/ML.

¹Based on a Dell Technologies survey of CloudIQ users conducted May through June 2021.