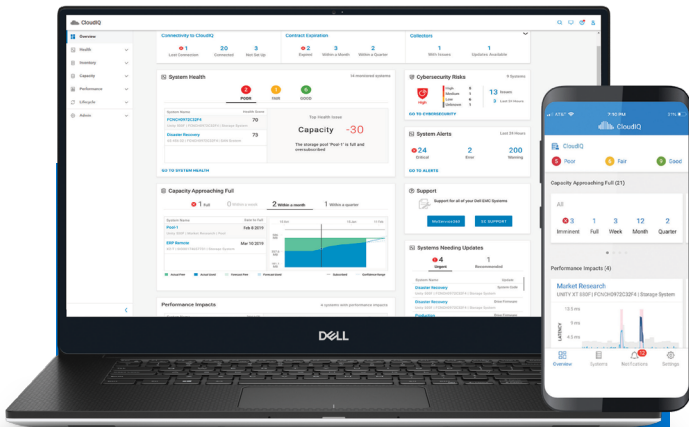


# CloudIQ - AIOPs for Intelligent Infrastructure Insights



Get smarter with proactive monitoring, machine learning and predictive analytics

CloudIQ is the cloud-based proactive monitoring and predictive analytics application for the Dell infrastructure portfolio. It combines the human intelligence of expert engineering and the machine intelligence of AI/ML to provide you with the insight to more efficiently and proactively manage your IT infrastructure to meet business demand.

The CloudIQ portal displays your Dell infrastructure systems in one view to simplify monitoring across your core and secondary data centers and edge locations as well as data protection in public clouds. With CloudIQ, you can more easily assure that critical business workloads get the capacity and performance they need, spend less time monitoring and troubleshooting infrastructure, and spend more time innovating and focusing on projects that add new value to your business.

## CloudIQ for AIOps

### Essentials

- **Reduce Risk** – by proactively notifying you about system health issues and recommending actions to address performance, capacity, cybersecurity, and other issues
- **Helps Plan Ahead** – by predicting when capacity will run out so you can proactively expand storage to meet growing business data and workload demand
- **Improves Productivity** – by providing intelligent insights about the full technology stack enterprise-wide in one view, by easy information sharing with team members, and by integrating health notifications and data with third-party IT applications to automate workflows

## One Portal for Enterprise Visibility

CloudIQ supports the Dell infrastructure portfolio for multi-system/multisite visibility:

- Server: PowerEdge
- Storage: PowerStore, PowerMax, PowerScale, PowerVault, Unity XT, XtremIO, and SC Series
- Data Protection: PowerProtect DD Series (including DD Virtual Edition) and PowerProtect Data Manager
- Hyperconverged Infrastructure: VxRail and PowerFlex
- Converged Infrastructure: VxBlock
- Network: PowerSwitch (Ethernet/LAN) and Connectrix (SAN)
- Cloud Services: APEX Data Storage Services

You can access CloudIQ from a browser and from the CloudIQ mobile app on your smartphone. Getting started with CloudIQ is easy and safe, because it is hosted in the secure Dell IT Cloud. There is no software to install, maintain or update on your infrastructure or personal devices. It takes only a few clicks for you to initially connect your systems to CloudIQ through the trusted remote networking they already use to connect to Dell Technologies support services. It's that simple.

## Delivering Business Results

*“CloudIQ gives me a quick status of my most important infrastructure, saving me nearly a full day’s research per week. And it lets me easily dig in deeper wherever I want.”*

— Michael Hale  
Chief Technology Officer  
Steward Health Care System

*“With 16 hours saved per week, CloudIQ helps improve productivity, and that frees us to spend more time on performance tuning and on R&D for new products.”*

— Darrel Schueneman  
Manager  
Cloud Operations Plex Systems

*“The images are easily available to our staff anywhere, anytime. The real value for us is increased capacity at reduced cost.”*

— Tom Stride  
Senior Vice President and CIO  
Holy Redeemer Health System

## Reduce Risk

Leveraging machine learning and a suite of advanced analytics algorithms, CloudIQ helps answer key questions that you deal with every day.

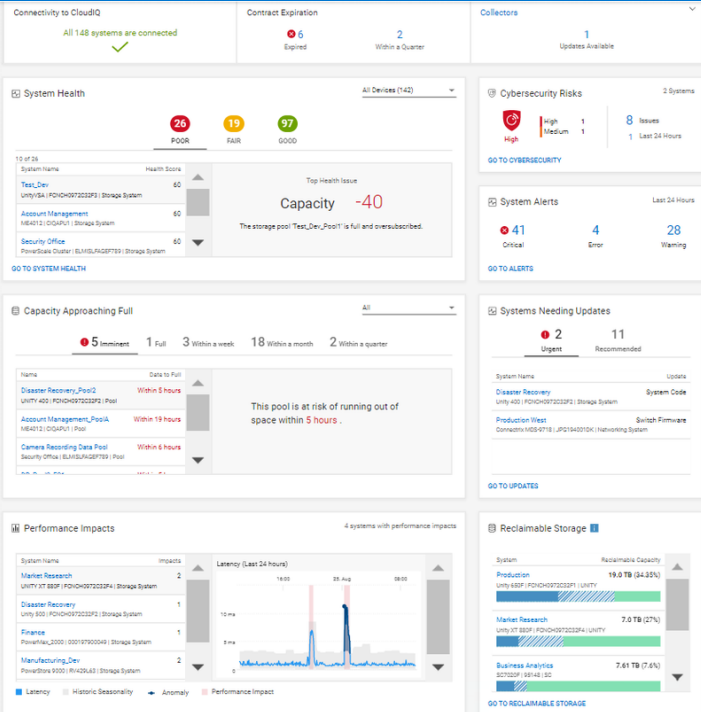
- **Proactive Health Scores:** Give you an at-a-glance view of issues across your environment, prioritizing them so you can easily understand the most imminent risk, see what needs to be addressed, and then quickly take appropriate action.
- **Performance Impact Analysis and Anomaly Detection:** Uses machine learning and predictive analytics to zero-in on incidents that had an impact on the environment and need remediation. Displaying the relationship of key metrics and deviations from normal accelerates triage and time-to-resolution.
- **Workload Contention Analysis:** Identifies workloads that are competing for shared resources and need to be redistributed. Often called “noisy neighbor” analysis, this helps you optimize the performance of your workloads.
- **VMware Integration:** Provides VM performance details plus end-to-end mapping and performance impact analysis across the data path: VM, ESXi host, datastore, network and storage. Key performance indicators and configuration changes are time-correlated for root cause.
- **Cybersecurity Monitoring:** Assesses if infrastructure security configurations adhere to your policy, notifies you about misconfigurations, and recommends actions to keep your data safe. Read the [CloudIQ Cybersecurity Data Sheet](#).
- **Intelligent Multi-System Updates:** Actively manage and execute non-disruptive updates for multiple systems or clusters from a central location for a more efficient upgrade process. Now available for VxRail.

## Plan Ahead

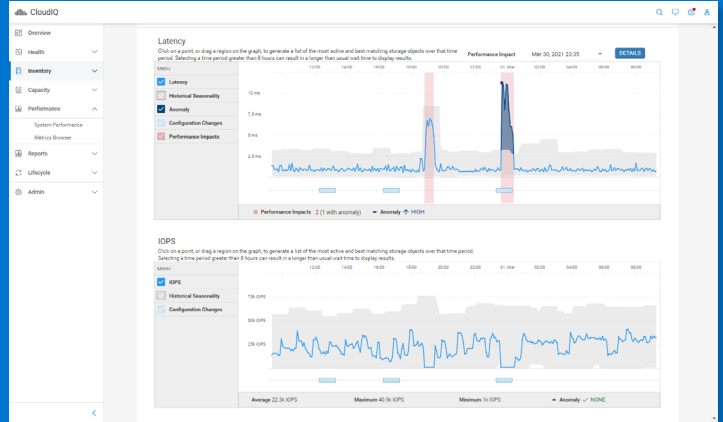
CloudIQ helps anticipate business needs by intelligently projecting capacity utilization, so you can plan capacity requirements and budget accordingly.

- **Capacity Full Prediction:** Is focused on helping you avoid a short-term data unavailability event by predicting within a 3-month window when capacity is expected to reach full.
- **Capacity Forecasting:** Helps you more intelligently project capacity utilization with selectable time frames based on machine-learned data, so you can plan capacity and budget far ahead.
- **Capacity Anomaly Detection:** Identifies a sudden surge of capacity utilization that could result in imminent data unavailability. This helps you avoid the “2:00 a.m. phone calls” when capacity utilization has spiked due to conditions such as a runaway query or rogue actor in your environment.

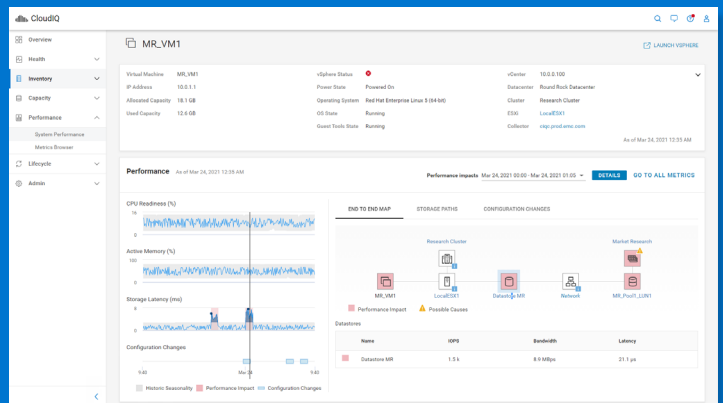
# Intelligent Infrastructure Insights



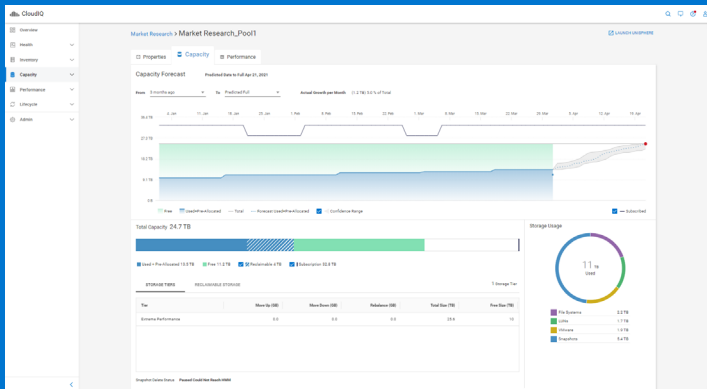
## CloudIQ Overview



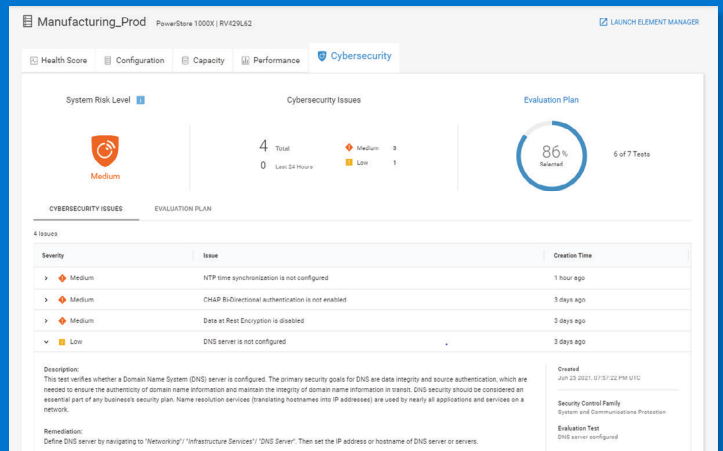
## Intelligent Performance Tracking and Anomaly Detection



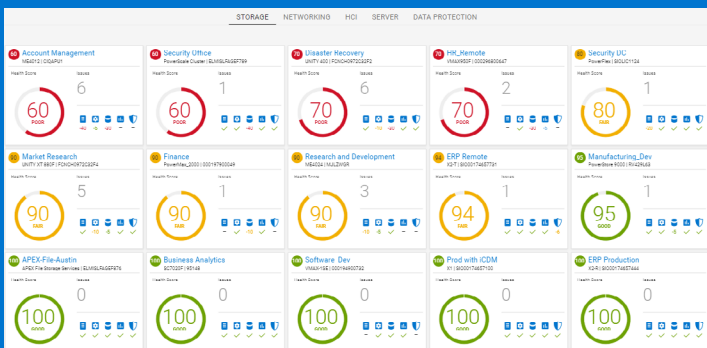
## VM and End-to-End Data Path Performance



## Intelligent Capacity Prediction



## Cybersecurity Risk Details and Recommendations

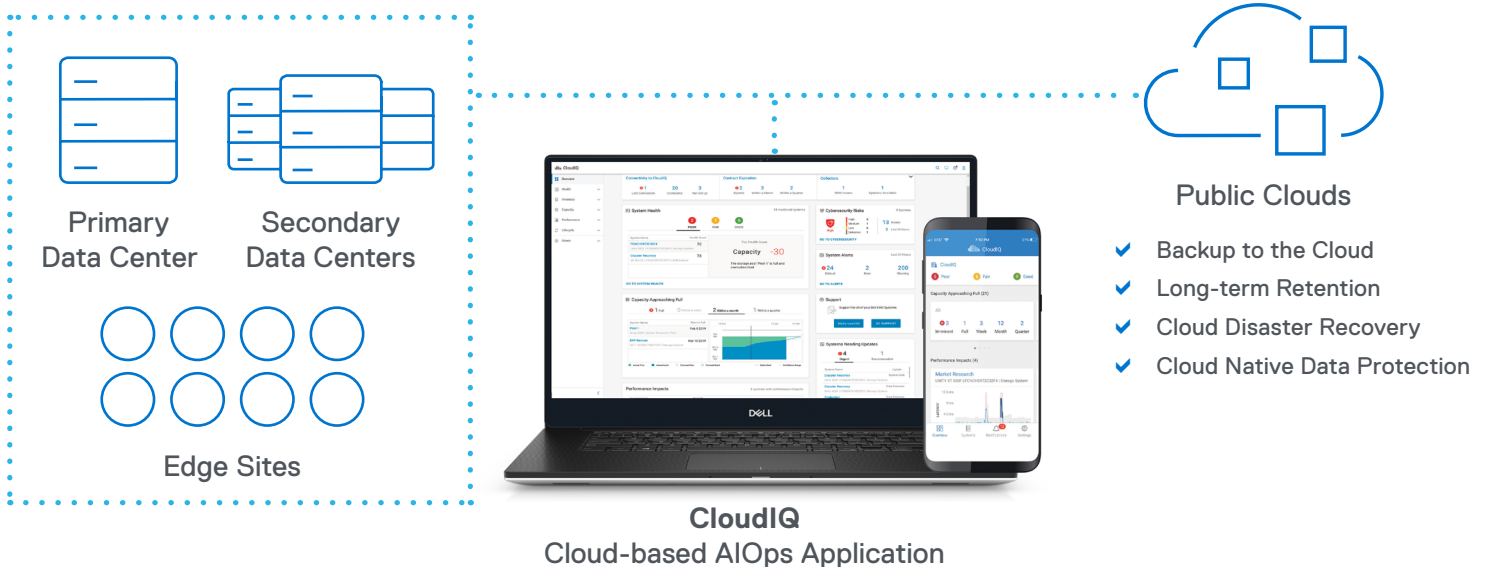


## System Health Scores

## Improve Productivity

CloudIQ helps improve productivity of your IT resources and staffing through breadth, flexibility, and integration.

- **Breadth of coverage:** Having a single portal for monitoring and troubleshooting infrastructure across all your locations, including data protection in public clouds, simplifies operations and improves productivity. According to user feedback, CloudIQ results in 2X to 10X faster time-to-resolution of issues<sup>1</sup> saves IT an average 9 hours per week<sup>2</sup>.
- **Collaboration and communication:** Proactive notification of issues and customizable ways to view and share information that improve productivity. CloudIQ proactively sends health notifications and recommendations via email and keeps data in your hands anywhere/anytime via mobile app. You can also customize, schedule, and share reports about groups of systems and locations that matter to you, your team, and your stakeholders.
- **Integration for Automated Workflow:** Send CloudIQ notifications and data to third-party applications via Webhook and REST API to accelerate IT processes. Examples include ServiceNow (for ticketing), Slack (for DevOps notifications); Microsoft Teams (for escalation), plus Ansible and VMware vRealize (for automating corrective actions in the infrastructure).



## Immediate Time to Value

You can start using CloudIQ with two easy steps after your Dell system is up and running.

- First connect your system with Secure Remote Services, or Support Assist, which will send telemetry data to CloudIQ.
- Next, go to [cloudiq.dell.com](https://cloudiq.dell.com), enter your Dell ProSupport or ProSupport+ credentials, and you'll be authenticated and able to start using CloudIQ at no additional cost.

CloudIQ is hosted in the secure Dell Technologies Private Cloud, providing you immediate time-to-value. With its continuous (agile) development process, Dell Technologies constantly, seamlessly, and non-disruptively updates CloudIQ in its private cloud, giving you instant and secure access to the latest and greatest features.

For CloudIQ technical information, demonstration videos, third-party reviews, and case studies, go to:

[dell.com.cloudiq](https://dell.com/cloudiq)

<sup>1</sup>Based on a Dell Technologies survey of CloudIQ users conducted May-June 2021. Actual results may vary. CLM-000884

<sup>2</sup>Based on a Dell Technologies survey of CloudIQ users conducted May-June 2021. Actual results may vary. CLM-003872