

DELL EMC ISILON INSIGHTIQ

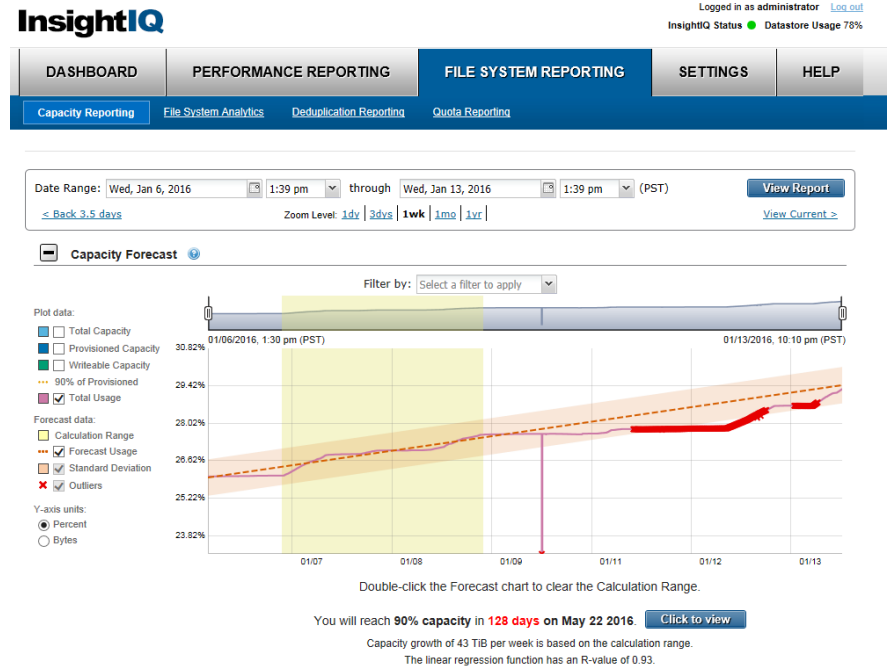
Customizable analytics platform to accelerate workflows and applications on Isilon clusters

ESSENTIALS

- Powerful monitoring and reporting tools to optimize performance
- Uncover potential bottlenecks without professional services or highly trained personnel
- Determine dataset growth trends for optimal utilization
- Identify past performance trends to help predict future needs
- Diagnose historical events as simply as “real-time” events
- Optimize resources with quota and deduplication reports
- Added forecasting capabilities to capacity usage data
- No-charge software license
- LDAP integration to give users fine-grained access based on group memberships

Powerful scale-out storage analytics

Dell EMC® Isilon® InsightIQ® provides powerful performance monitoring and reporting tools to help you maximize the performance of your Isilon scale-out NAS platform. Isilon allows you to easily manage petabytes of storage and computing resources. With InsightIQ software you can go a step beyond with advanced monitoring and reporting tools to identify performance bottlenecks in your workflows and optimize the amount of high-performance storage required in your environment. InsightIQ is available for no-charge and provides you with advanced analytics to optimize applications, correlate workflow and network events.

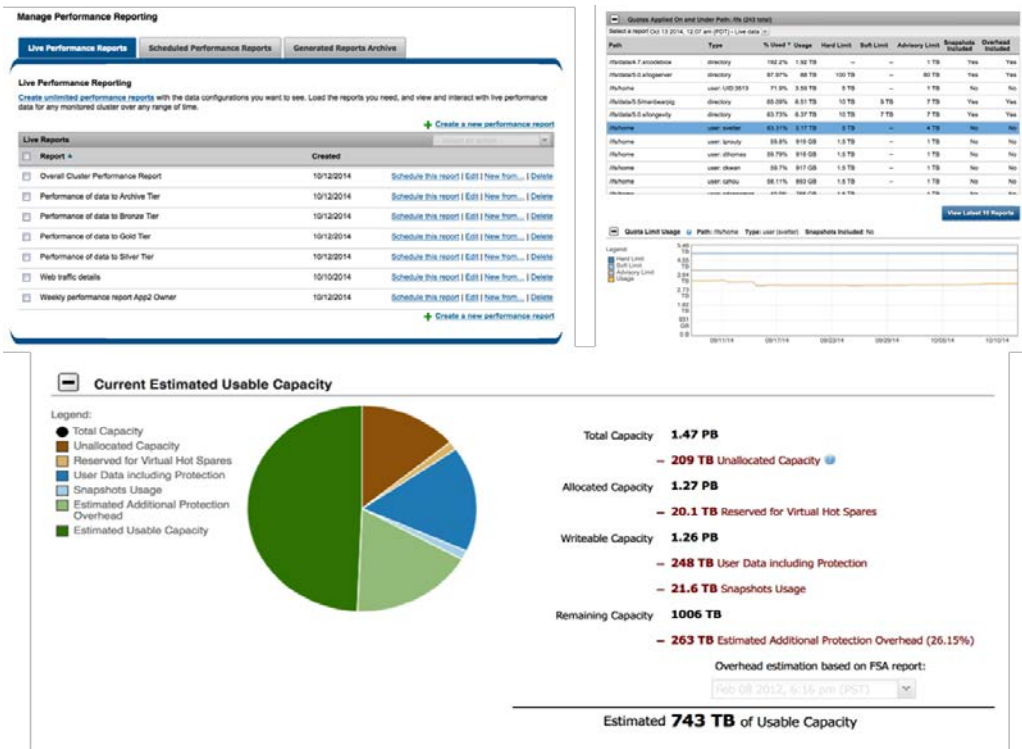


Report and monitor performance

InsightIQ takes live performance metrics to the next level by including flexible deployment options that will help you quickly gain actionable understanding into detailed performance and capacity trends leading to improved storage utilization.

With InsightIQ, you can achieve a new understanding of complex data without complicated analysis. Performance metrics can be visualized on a per-client, per-protocol, and per-operation basis so that you can quickly diagnose infrastructure, network, and application bottlenecks. With InsightIQ, you can trend detailed file-system information on a per pool, per-directory and per-file basis and analyze and retrieve information in near-term and historical contexts as simply as "real-time" events. You can correlate between metrics to better anticipate system issues and to avoid impact on end users. Enhanced reporting of available storage capacity allows for improved capacity planning while quota reporting enables clear visualization of storage resources. Monitoring of system cache effectiveness allows for optimizing the storage infrastructure to meet the performance needs of the business.

InsightIQ allows you to leverage cost-saving information regarding utilization and performance so that you can maximize the overall price/performance of your storage system. You can identify the business value of critical data over time and align the use of storage resources to provide cost-effective analytics with minimal impact to your storage infrastructure.



Flexible deployment options

InsightIQ is a no-charge application that can be deployed in three ways: as a OVA and self-extracting installer, as a virtual appliance for VMware ESXi 5 and 6, or on physical hardware on Red Hat Enterprise Linux (RHEL 6.x) or CentOS 6 via Red Hat Package Manager (RPM) installation. You can upgrade from InsightIQ 4.0 or later to InsightIQ 4.1. You can interact with the rich interface of InsightIQ using Microsoft Internet Explorer 11, Microsoft Edge, Mozilla Firefox, Google Chrome, or Apple Safari 7, 8, and 9.

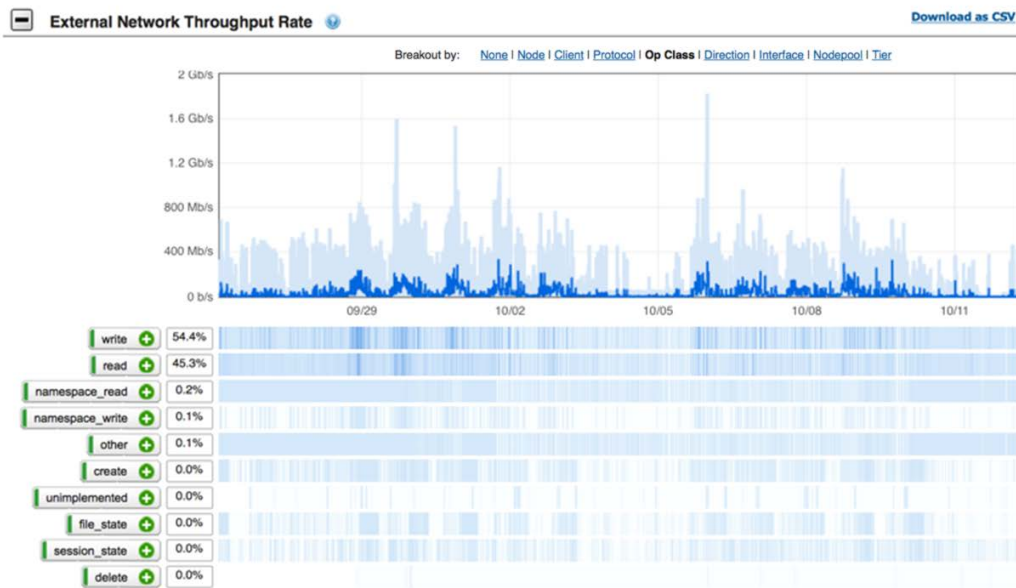
Scalable solution

As an off-cluster application, InsightIQ minimizes the impact of monitoring. Data collection, aggregation, transformation, and display are all handled by the InsightIQ installation to offload processing from the storage system and provide fault isolation. The Isilon OneFS® operating system collects the statistics and delivers the information via a REST-based API to InsightIQ. InsightIQ data store can be moved from one location to another or compressed and exported as tar files. InsightIQ also includes LDAP support to give users admin, read-only, or login access based on LDAP group memberships

Rich visualizations and interactions

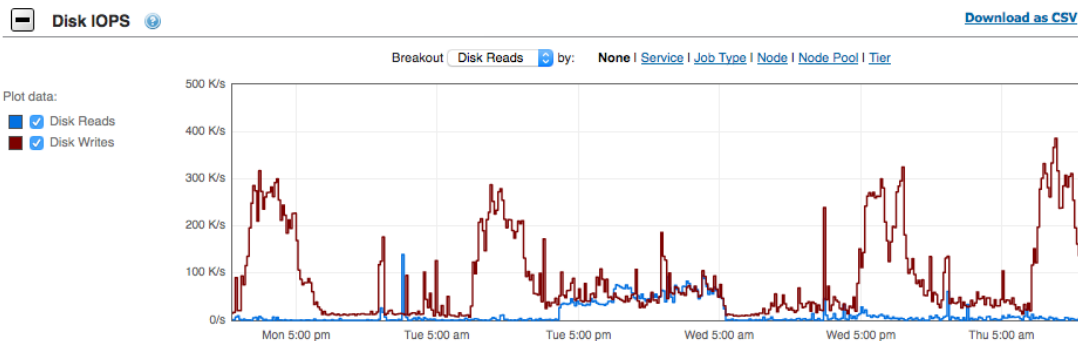
To maximize the transformation of data into information, InsightIQ provides rich graphics and powerful, yet simple, metaphors that emphasize outliers, enabling better diagnosis of bottlenecks and the optimization of workflows.

Breakout by: [None](#) | [Node](#) | [Client](#) | [Protocol](#) | [Op Class](#) | [Direction](#) | [Interface](#) | [Nodepool](#) | [Tier](#)



Performance resource management report

InsightIQ 4.1 introduces a new report that displays statistics for the performance resources consumed by the background OneFS jobs and services, such as SyncIQ, SmartDedupe, FSA, etc. Isilon storage admins are now armed with better data and clearer understanding of what resources these jobs and services are consuming, which can help them decide if adjustments in the configuration and scheduling of these jobs can help improve the balanced utilization of cluster resources. The report in InsightIQ will show the following stats for each job and service tracked, throughput, operations per second, CPU usage, cache hit rates and disk read/writes.



Elaborate drill downs and roll-ups

InsightIQ enables you to start with a broad aggregate dashboard report of your storage environment, break down data along key axes, zoom to long- or short-time scales, and quickly highlight critical information to draw definitive conclusions. The analytics platform makes it easy to correlate seemingly unrelated data across both present and historical conditions in standard or custom reports, as well as distribute the analysis to the various stakeholders in the enterprise via email. Visualization of available capacity, quota usage, deduplication effectiveness and cache performance provides administrators a detailed view of the performance of the storage infrastructure.

Detailed monitoring and reporting

With InsightIQ, you can easily create customized reports to run at any interval required to deliver key performance information to stakeholders throughout the enterprise. Activity can be clustered for a streamlined review of changes in workflows and applications, and the following data points apply:

- ESRS integration for application up-time and telemetry gathering
- Forecasting capability to capacity usage data
- Available storage capacity while accounting for system overhead
- Network traffic per-interface, per-node, per-client, and per-protocol basis
- Protocol operation rates and latencies on a per-protocol, per-client, and per-operation class basis
- Per-node CPU utilization and disk throughput stats, including Minimum and Maximum and Averages
- Job Engine monitoring
- Visualization to facilitate self-diagnosis
- Quota reporting that enables quick and simple visualization of all quotas
- Granular reporting per storage pool and per storage tier
- Extensive performance monitoring of cache effectiveness
- Per user reporting to identify current top users
- Performance monitoring of OneFS jobs and services.

File system analytics

The actual analytics are simple to use and help you determine the direction files and file types are trending, which datasets are growing more rapidly, and how data aligns to storage costs. InsightIQ includes an interactive directory usage browser where property breakouts are filed by path, extension, and access time to make it easier for you to track metrics. Files and directories are sorted and ordered by count, size, and age to provide a variety of categories when reviewing system use.

Powerful data export

With InsightIQ, the included data export tool allows users to access data in two ways: through ad hoc data extraction by simply clicking on “download” link from the user interface and exporting it into a spreadsheet in CSV format; or by using the CLI, which enables you to define the data to extract, and to set up a regular schedule of data exports into your own analytics tool.

Drive storage performance metrics to the next level

The powerful performance monitoring and reporting tools helps you maximize the performance of your existing storage while forecasting future needs and reaping the benefits of deeper data analytics in a simple-to-manage tool.

Compatibility chart

SUPPORTED STATISTICS	INSIGHTIQ					ONEFS						
PER OS RELEASE	3.0	3.1	3.2	4.0	4.1	7.0.x	7.1	7.1.1	7.2	8.0	8.0.1	8.1
DISK CAPACITY	X	X	X	X	X	X	X	X	X	X	X	X
FILE SYSTEM ANALYTICS	X	X	X	X	X	X	X	X	X	X	X	X
FILE SYSTEM CACHE	X	X	X	X	X	X	X	X	X	X	X	X
L3 CACHE		X	X	X	X			X	X	X	X	X
FILE SYSTEM EVENT	X	X	X	X	X	X	X	X	X	X	X	X
SMBV2, NFSV4	X	X	X	X	X	X	X	X	X	X	X	X
JOB MONITORING	X	X	X	X	X		X	X	X	X	X	X
QUOTA REPORTING		X	X	X	X	X	X	X	X	X	X	X
DEDUPE REPORT		X	X	X	X		X	X	X	X	X	X
PER POOL REPORT			X	X	X				X	X	X	X
DATA STORE IMPORT OF EXPORT				X	X				X	X	X	X
ESRS SUPPORT				X	X					X	X	X
REAL-TIME ANALYTICS				X	X					X	X	X
LDAP INTEGRATION					X						X	X
ONEFS JOB AND SERVICES					X						X	X

TAKE THE NEXT STEP

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