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# **HPE InfoSight**

# Artificial Intelligence for your Hybrid Cloud world





### **Product overview**

HPE InfoSight transforms how infrastructure is managed and supported.

#### Predictive support automation

- Predicts and prevents issues
- Solves problems across infrastructure
- Transforms the support experience

#### Al-driven management

- Makes managing effortless
  Optimizes resource allocation
- Sees what others can't

#### Unique product experience

- Makes infrastructure smarter
- Enables infrastructure to self-improve
- Simulates work-load changes

# Using Artificial Intelligence to simplify operations—unlocking your data's potential

Your business can't afford any disruptions or delays. And you want nothing more than to spend less time on infrastructure. However, the complexity inevitably leads to unexpected problems and your days, nights, and weekends consumed taking care of infrastructure.

You want to move your business forward, but infrastructure holds you back with an endless cycle of break-fix-tune-repeat. As it becomes increasingly vital and complex, you know this hands-on approach won't work anymore. That's why you keep asking yourself:

- How can I ensure nondisruptive availability for my applications?
- How can I optimize my ever-changing workloads?
- How can I tune my infrastructure for better performance?
- How can I stop the firefighting?

There hasn't been a good answer until now. It's called HPE InfoSight.

### Data is the foundation of Artificial Intelligence

HPE has been at the forefront of this new data paradigm and a decade ago, started designing systems with sensors across the infrastructure stack. Trillions of data points have been collected and available to be used by HPE's AI-Engine, InfoSight and every new and existing customer can take advantage of this data engine. Artificial Intelligence (AI), is the key to unlocking the power of your data.

# HPE InfoSight—Artificial Intelligence for your Hybrid Cloud world

HPE InfoSight, is the best-in-class AI solution to remove the burden of managing your infrastructure and solve your most challenging problems. HPE InfoSight uses cloud-based machine learning to provide global insights into the status and health of infrastructure, all in one location. HPE InfoSight predicts and prevents problems across the infrastructure stack and ensures optimal performance and efficient resource use. HPE InfoSight constantly analyzes and correlates millions of sensors every minute, allowing all customers to benefit as their systems get smarter and more reliable.

This is what you get with HPE InfoSight watching over your infrastructure 24x7:

issues automatically opened and resolved<sup>1</sup>

85% less time managing

problems<sup>2</sup>

79% lower storage operational expenses<sup>3</sup>

<sup>1</sup> "Redefining the standard for system availability," 2017

<sup>3</sup> "Assessing the financial impact of HPE InfoSight predictive analytics," 2017



### Machine learning in the cloud

#### Getting smarter every second

HPE InfoSight sees beyond the limits of other tools because of its unique approach to data collection and analysis. Every second, millions of sensor measurements capturing the state of the systems, subsystems, and surrounding IT infrastructure in our global installed base are collected and analyzed.

#### **Cloud-based platform**

HPE InfoSight continuously learns from the telemetry. It develops an understanding of the ideal operating environment for every workload and application. Advanced machine learning then drives its **predictive analytics** and **recommendation engines**. Then, problematic behavior is predicted through recognition of the underlining patterns and configurations in each system, resulting in significant customer impact.



Figure 1. HPE InfoSight platform

"InfoSight's predictive analytics have saved us from potentially impactful issues. iland provides 100% availability to our customers, and InfoSight is a huge part in making that happen."

– Justin Giardina, CTO, iland Secure Cloud





# Benefits of predictive support automation:

- 86% of issues automatically predicted and resolved<sup>4</sup>
- No Level 1 or 2 support; Level 3 in <1 min on average<sup>5</sup>
- 54% of problems resolved are outside of storage<sup>6</sup>
- Net Promoter Score of 85<sup>7</sup>
- Customer satisfaction >4.91 out of 5<sup>8</sup>

# Customer emails to HPE Nimble Storage support:

"...support exceeded my expectations...it is rare today to have customer support that actually support you."

#### "...ROCK STARS."

"...the support experience that you sold us was every bit as good as you sold it. (the Nimble TSE) was able to figure out some things no one else that has looked at this environment has been able to track down."

"Nimble...isolated the problem to a DB issue."

## **Predictive support automation**

#### Delivering a support experience you actually like

HPE InfoSight transforms support into an experience without the headaches and frustration. Dubbed a necessary evil, vendor support in the industry has always been post-mortem, break-fix with multi-tiered escalations, mundane questions, manual log files, and finger-pointing.

#### Problems predicted and prevented

HPE InfoSight puts the focus on prevention. It uses predictive analytics to predict, prevent, and auto-resolve problems from storage to VMs before they can affect your business. Hundreds of predictive signatures from availability, performance, security, capacity, to data protection are continuously monitored in every system across the installed base.

If there is ever a problem experienced in the installed base, HPE InfoSight learns to predict the issue and prevent anyone else from seeing the same problem.



Figure 2. Design approach to predictive support automation

#### No more escalations

Predictive analytics takes away support escalations. **HPE Nimble Storage** has eliminated Level 1 and 2 support since 86% of problems simply go away.<sup>9</sup> So, in the rare case, you need support, and you can speak directly to Level 3. Never be escalated again.

#### Rapid root cause

HPE InfoSight already has the information about your environment, so even the most complex issues get resolved quickly. Never recreate a problem or send log files again.

#### We'll call you

If HPE InfoSight detects a problem that can't be automatically resolved, then our support engineers proactively investigate and reach out with the fix—even if the problem is outside of storage. Never worry about who to call because we call you.

4. 5. 6. 7. 8 Based on an internal study of HPE Nimble Storage installed base. August 2017

"Redefining the standard for system availability," 2017





# Al-driven management

#### Seeing ahead to get you ahead

HPE InfoSight takes the guesswork out of managing infrastructure. It tells you how you can improve performance, optimize your resources, and plan for the future. And with its cloud-based portal, it's easy for you to take advantage of its intelligence.



#### Sees what others can't

HPE InfoSight sees from the past to the future, up and down your infrastructure stack, and across your systems, providing you a single source of truth for your infrastructure. For complex, virtualized environments, its cross-stack analytics pinpoints abnormal performance issues between storage and VMs and underutilized virtual resources without effort from you.

Figure 3. Correlated cross-stack analytics

#### Diagnosis

Storage CPU saturation is affecting random read and write performance.

#### Recommendations

1. Consider QoS limits on high CPU volumes

2. Consider staggering workloads on high CPU volumes

Figure 4. Al performance recommendations



Figure 5. What-if sizing for new infrastructure

#### Gets more out of your resources

There's too much manual tuning day to day. All you want is the best performance and most efficient resources no matter how your workloads change. HPE InfoSight helps automate tuning and gives you the answers before you even ask the question. It automatically identifies opportunities to improve performance and optimize resources with a clear recommendation across the stack, all the way up to the VM level. HPE InfoSight is at the forefront of the evolution of cross-stack analytics. HPE InfoSight optimizes VM performance by diagnosing root cause of performance bottlenecks, and recommends the right remediation through app- and resource-centric modeling all in one click.

#### Makes planning simple

HPE InfoSight simplifies the infrastructure lifecycle from planning to expanding. HPE InfoSight resource planner accurately sizes new infrastructure by simulating multiple what-if scenarios using app-centric machine learning models. It also accurately predicts capacity, performance, and bandwidth needs with specific upgrades. HPE InfoSight optimizes workload placement based on simulated scenarios to predict performance and capacity on an array and how this workload affects neighboring resources.







# **Unique product experience**

#### Making infrastructure autonomous

You've always had to bear the burden of infrastructure while it sits idle and unconscious, that is, until now.

HPE InfoSight is constantly collecting data and learning from customers' workloads—making all customers smarter. HPE InfoSight is a pioneer in the infrastructure space in this new AI-first world and building new AI models to turn insights into actions.

HPE InfoSight is paving the path for a self-driving infrastructure vision—one that self-manages, self-heals, and self-optimizes. Today, HPE InfoSight tells you what to do. Tomorrow, it does it for you.



# Data center infrastructure supported

# Financial impact of HPE InfoSight

Infrastructure powered by HPE InfoSight translates directly into significant financial impact. Enterprise Strategy Group researched hundreds of HPE and third-party customers and arrived at these conclusions:<sup>10</sup>

### 79%

lower storage operational expenses

#### 73%

fewer trouble tickets in the environment 85%

less time spent resolving storage-related trouble tickets

#### 69%

faster time to resolution for events that necessitate Level 3 support



**HPE Nimble Storage** 

Predictive cloud-ready, and timeless for business value today and tomorrow. Experience radical simplicity and 99.9999% guaranteed availability.



HPE 3PAR StoreServ Storage

Flexible, scalable Tier 1 all-flash data storage arrays for instant application provisioning and high levels of service—at a fraction of the cost.



**HPE ProLiant DL** 

Secure and versatile rack-optimized servers with a balance of performance, capacity, and manageability.

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#### **HPE Apollo Systems**

High-density, rack-scale compute, storage, and networking solutions for massive scale-up/scale-out for Big Data, object storage, and HPC workloads.

Figure 6. HPE InfoSight supports an end-to-end portfolio



**HPE ProLiant ML** 

The ideal choice for remote and

branch offices and growing business.

**HPE Synergy** 

World's first platform architected for composable infrastructure, an adaptable Hybrid Cloud engine built for today's workloads and tomorrow's disruptors.

# You're not on your own when you have HPE InfoSight.

You have the industry's most experienced AI watching over your Hybrid Cloud environment





Learn more at hpe.com/storage/infosight



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a00043401ENW, November 2018, Rev. 1